USEITI

The United States Extractive Industries Transparency Initiative

2015

Executive Summary

2015 US Extractive Industries Transparency Initiative (USEITI) **Report by the Numbers**

Extractive Industries' Revenue in the United States

1st USEITI Report

In 2013, **$12.64 billion** Department of the Interior (DOI) revenue for extraction on federal lands

In 2013, **$11.8 billion*** in corporate income tax receipts from Mining and Petroleum and Coal Products Manufacturing industries

Company Participation, Reporting, and Reconciliation Results

100%

45 companies asked to report

69%

31 companies out of those 45 reported and reconciled **$8.5 billion** in DOI revenue

29%

12 out of a maximum of 41 applicable companies reported **$190 million** in corporate income taxes

100% of **17** material variances have been explained

USEITI Unique Aspects

100% of DOI in-scope revenue unilaterally disclosed by DOI in online report

12 extractive industries local community case studies

Publicly available data from **18** states with significant extractive industries

2 Multi-Stakeholder Group members representing Indian tribes and interests from civil society and government

Over 70 cross-sector collaboration meetings in 2015

*Sample-based calculation from US Internal Revenue Service Statistics of Income, "Tax Stats — Returns of Active Corporations — Table 1," access the historical data here: http://www.irs.gov/uac/SOI-Tax-Stats-Returns-of-Active-Corporations-Table-1

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The United States Extractive Industries Transparency Initiative

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INTRODUCTION

Introduction

ABOUT THE DATA IN THE 2015 USEITI REPORT:

For consistency with the EITI Standard and across datasets, this report uses 2013 data whenever possible.

The reporting period in question for the 2015 USEITI reconciliation was calendar year 2013 (CY 2013), from January 1, 2013 through December 31, 2013.

Revenue data is often reported by fiscal year (FY). In the case of the federal government, FY 2013 includes October 1, 2012 through September 30, 2013. Unless otherwise noted, FY 2013 refers to the federal fiscal year.

Corporate income tax data is often reported by tax year. A tax year is a period of time covered by a tax return, usually a calendar year, but not necessarily.

Most other data sets use CY 2013, and unless otherwise specified, 2013 refers to the calendar year.

In 2011, the United States joined seven other countries in launching the Open Government Partnership[1] (OGP), a global platform of participating countries dedicated to making governments more open, accountable, and responsive to citizens. As part of the 2011 OGP National Action Plan[2], the United States sought to improve the transparency of extractive industries for US citizens, as well as manage public resources—specifically natural resources on federal lands—more effectively by joining the Extractive Industries Transparency Initiative (EITI). In 2013, the United States restated this commitment in the second OGP National Action Plan[3].

The EITI is a global standard that promotes "open and accountable management of natural resources."[4] The EITI International Board and implementing member countries believe that a nation's natural resource wealth belongs to its citizens. Through increased transparency and accountability, the EITI can increase public trust and dialogue, improve governance, attract investment, and manage and enhance

[1] OGP, http://www.opengovpartnership.org/

[2] The White House, "The Open Government Partnership: National Action Plan for the United States of America," September 20, 2011, https://www.whitehouse.gov/sites/default/files/us_national_action_plan_final_2.pdf

[3] The White House, "The Open Government Partnership: Second Open Government National Action Plan for the United States of America," December 5, 2013, https://www.whitehouse.gov/sites/default/files/docs/us_national_action_plan_6p.pdf

[4] EITI, https://eiti.org/eiti

SINCE 2003, INTERNATIONAL REPRESENTATIVES FROM GOVERNMENT, INDUSTRY, AND CIVIL SOCIETY HAVE DEVELOPED AND ADAPTED THE EITI PRINCIPLES. THESE PRINCIPLES ARE THE CORNERSTONE OF THE INITIATIVE AND ENDORSED BY ALL EITI STAKEHOLDERS:

1. We share a belief that the prudent use of natural resource wealth should be an important engine for sustainable economic growth that contributes to sustainable development and poverty reduction, but if not managed properly, can create negative economic and social impacts.
2. We affirm that management of natural resources wealth for the benefit of a country's citizens is in the domain of sovereign governments to be exercised in the interests of their national development.
3. We recognize that the benefits of resource extraction occur as revenue streams over many years and can be highly price dependent.
4. We recognize that a public understanding of government revenues and expenditure over time could help public debate and inform choice of appropriate and realistic options for sustainable development.
5. We underline the importance of transparency by governments and companies in the extractive industries and the need to enhance public financial management and accountability.
6. We recognize that achievement of greater transparency must be set in the context of respect for contracts and laws.
7. We recognize the enhanced environment for domestic and foreign direct investment that financial transparency may bring.
8. We believe in the principle and practice of accountability by government to all citizens for the stewardship of revenue streams and public expenditure.
9. We are committed to encouraging high standards of transparency and accountability in public life, government operations, and in business.
10. We believe that a broadly consistent and workable approach to the disclosure of payments and revenues is required, which is simple to undertake and to use.
11. We believe that payments' disclosure in a given country should involve all extractive industry companies operating in that country.
12. In seeking solutions, we believe that all stakeholders have important and relevant contributions to make—including governments and their agencies, extractive industry companies, service companies, multilateral organizations, financial organizations, investors, and nongovernmental organizations.

This Executive Summary is just a fraction of the 2015 USEITI Report. The United States has developed a more extensive online report to improve public engagement and access. Visit the interactive online report at https://useiti.doi.gov/. There, you can:

1. Explore maps and charts of extractive industries, as well as their economic and revenue data
2. Read 12 county case studies on the history, geology, production, employment, revenue, and fiscal costs of specific industries
3. Download relevant data sets
4. Conduct a curated search for additional data and information
5. Discuss and participate in USEITI

How do natural resources result in federal revenues?

The federal government issues leases granting rights to explore for natural resources which may exist on federal lands. In return, part of the sales value for many of these commodities is paid back to the government as "royalties" (along with other types of revenues), for the benefit of the American people.

See how it works >

How do extractive industries impact communities like mine?

In some communities extractive industries play a much larger role than in others. Read here about twelve communities that, over the last decade, have led U.S. counties in production of one of the following resources: iron; copper; gold; coal; oil; and natural gas.

View the case studies >

growth so that citizens receive financial and societal benefits from a country's natural resources.

To increase transparency and accountability, the EITI relies on a cross-sector partnership between government (agencies that oversee extraction in the United States), industry (companies operating in the extractive industries), and civil society (individuals and organizations that represent community and citizen interests). Together, all three sectors make up the Multi-Stakeholder Group (MSG) responsible for overseeing the EITI. An Independent Administrator (IA) also assists in implementing the EITI Standard. Later, a Validator commissioned by the EITI International Secretariat assesses whether or not the country successfully implemented the EITI Standard.

To implement the EITI Standard, all three sectors in a participating country collaborate in a disclosure process regarding natural resource revenue, called reconciliation. Government, industry, and civil society develop a framework for the reconciliation. Government and industry share with the IA the total amount of revenue the government received and industry paid in the year under review. The IA reconciles the reported revenue and investigates any discrepancies. The public can see the results for their respective country in an annual EITI report, which includes a contextual narrative of the country's legal and fiscal regime. At the time of this report, there are

48 EITI-implementing countries, 31 of which are compliant with the EITI Standard.

In the United States, the Secretary of the US Department of the Interior (DOI) leads the US Extractive Industries Transparency Initiative (USEITI). In December 2012, the Secretary of the Interior formed the MSG with 22 members and 21 alternates from government, industry, and civil society organizations to guide and oversee the USEITI. On December 19, 2013, the United States submitted an application to participate to the EITI International Board. The MSG developed this application after engaging stakeholders around the country and virtually through webinars and a two-month public comment period in the fall of 2013. On March 19, 2014, the EITI International Board accepted the United States as a candidate EITI country. In the summer of 2014, DOI also selected an IA for the USEITI, Deloitte & Touche LLP.

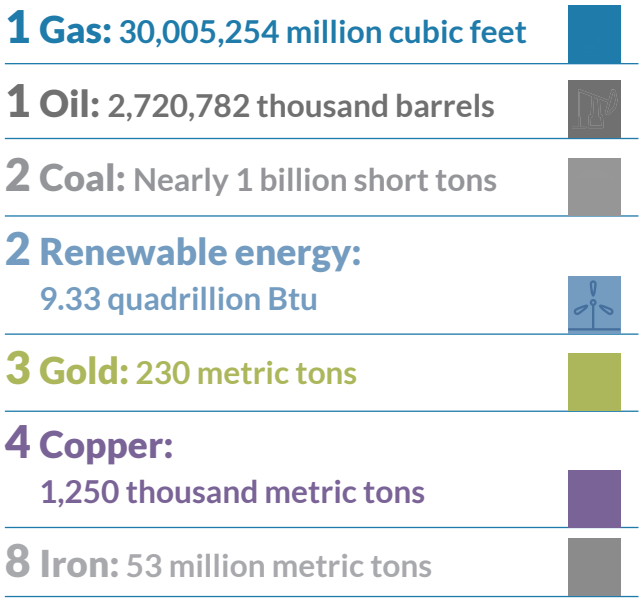
Extractive Industries and the EITI in the United States

The United States is a world leader in producing natural resources, including oil, gas, coal, renewable energy, and nonenergy minerals.

READ PUBLIC COMMENTS SUBMITTED DURING THE USEITI PROCESS:

- Public comments from the USEITI application development process (https://www.doi.gov/eiti/FACA/outreach)
- Public comments from minute notes of MSG meetings (https://www.doi.gov/eiti/FACA/msg-meeting-minutes)
- To see the USEITI 2015 Workplan, please visit here (https://www.doi.gov/sites/doi.gov/files/migrated/eiti/FACA/upload/2015-WORKPLAN-NARRATIVE-11_25_14-final.pdf)

2013 US Global Rank and Production Totals for Select Natural Resources Compared to Other Countries[5]



[5] Production totals are for all lands in the US, not just lands owned by the federal government. Gas production total from US Energy Information Administration (EIA), http://www.eia.gov/dnav/ng/ng_prod_sum_dcu_NUS_a.htm; Oil production total from EIA, http://www.eia.gov/dnav/pet/pet_crd_crpdn_adc_mbbl_a.htm; Information regarding global ranks for oil and gas production in 2013 and other years from EIA, http://www.eia.gov/todayinenergy/detail.cfm?id=20692; Coal production total from EIA, http://www.eia.gov/coal/production/quarterly/pdf/t1p01p1.pdf; While the EIA has yet to publish global coal production data for 2013, the US ranked second after China in 2012 according to this source. Other sources, such as the World Coal Association, state that this ranking remained unchanged in 2013, http://www.worldcoal.org/resources/coal-statistics/; Renewable production total from EIA, Table 10.1, http://www.eia.gov/totalenergy/data/monthly/index.cfm#summary; Information about US renewable energy production capacity globally from Renewable Energy Policy Network for the 21st Century, "Renewables 2014 Global Status Report," Figure 4, p. 26, http://www.ren21.net/Portals/0/documents/Resources/GSR/2014/GSR2014_full%20report_low%20res.pdf; Gold production total from the US Geological Survey (USGS), p. 67, http://minerals.usgs.gov/minerals/pubs/commodity/gold/mcs-2015-gold.pdf; Copper production total from USGS, p. 49, http://minerals.usgs.gov/minerals/pubs/commodity/copper/mcs-2015-coppe.pdf; Iron production total from USGS, p. 85, http://minerals.usgs.gov/minerals/pubs/commodity/iron_ore/mcs-2015-feore.pdf

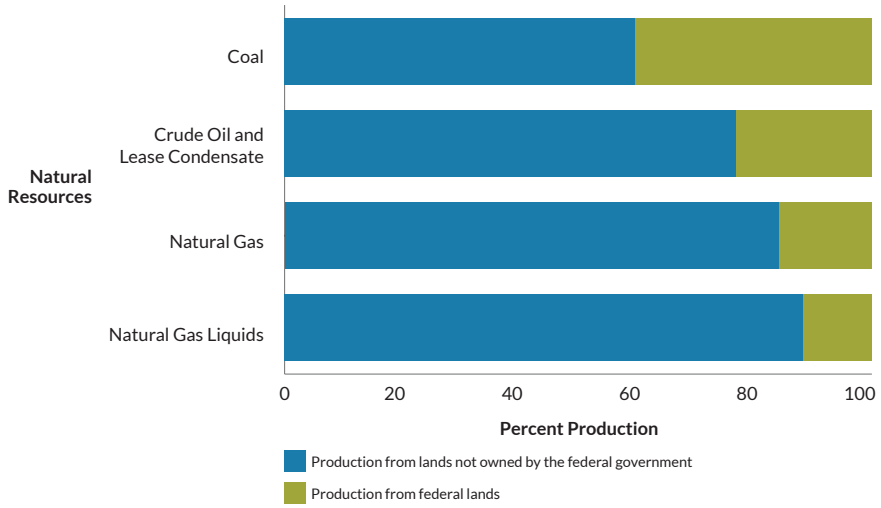
In the United States, federal, state, and local governments pass laws and write rules and regulations to govern natural resource management and extraction. The public has opportunities to participate by commenting during the rule-making process, during which the executive branch develops regulations to implement laws passed by the legislative branch. The public has additional opportunities to influence natural resource extraction in the United States by commenting on environmental analyses, planning documents, and other actions; participating in task forces; and attending community meetings.

There are notable differences between the United States and other EITI countries. Whereas in many countries natural resources belong chiefly to the national government, in the United States, individuals and corporations—in addition to federal, state, local, and tribal governments—own substantial natural resource wealth. The United States has 50 states, more than 3,000 counties, and more than 560 tribes. All of these different jurisdictions have their own governments that develop their own legal and fiscal frameworks to govern extractive industries.

Given that many different entities own and govern natural resources in the United States and that it would be difficult to compel jurisdictions to participate, the MSG focused the 2015 USEITI Report on extractive industries revenue stemming from production on federal lands. This is a small proportion of extractive industries' activity in the United States. In FY 2013, 40.3% of coal, 23.1% of crude oil and lease condensate, 15.9% of natural gas, and 11.7% of natural

gas liquids extraction in the United States took place on federal lands.[6]

FY 2013 Percent of Production Occurring on Federal Versus Non-Federal Lands for Select Natural Resources in the United States[1]



[1] US Energy Information Administration, "Sales of Fossil Fuels Produced from Federal and Indian Lands, FY 2003 through FY 2014," Table 1, July 2015, http://www.eia.gov/analysis/requests/federallands/pdf/eia-federallandsales.pdf

These natural resources located on federal lands—though a fraction of the total natural resources in the United States—belong to all US citizens. This makes accountable governance and transparent revenue management of these natural resources important issues for the public.

The United States sought and obtained adapted implementation of requirement 4.2 (d) for subnational revenue payments from the EITI International Board.[7,8] While this year's online report includes links to publicly available information about state revenue collection for extractive industries, next year the MSG will continue to encourage more states and tribes to directly participate in the USEITI through a three-tiered opt-in process[9]: (1) establishing a USEITI government point of contact, (2) nominating a member of the government to the USEITI MSG, and (3) helping to integrate legally available data into the contextual narrative. Currently, government representatives from the states of California and Wyoming, as well members from the Shoshone and Arapaho tribes, serve on the MSG. The MSG has also addressed subnational accountability and transparency in this year's report by developing 12 county case studies[10] that depict the impact of specific extractive industries on local communities' economies and local governments' coffers.

LEASE CONDENSATE IS LIGHT LIQUID HYDROCARBONS RECOVERED FROM OIL AND NATURAL GAS WELLS DURING PRODUCTION.

[6] US Energy Information Administration, "Sales of Fossil Fuels Produced from Federal and Indian Lands, FY 2003 through FY 2014," Table 1, July 2015, http://www.eia.gov/analysis/requests/federallands/pdf/eia-federallandsales.pdf

[7] EITI Standard requirement 4.2d states that "It is required that the multi-stakeholder group establish whether direct payments, within the scope of the agreed benefit streams, from companies to sub-national government entities are material. Where material, the multi-stakeholder group is required to ensure that company payments to sub-national government entities and the receipt of these payments are disclosed and reconciled in the EITI Report," EITI Standard, p. 29, https://eiti.org/document/standard

[8] Under Phase I of USEITI's implementation of requirement 4.2d, publicly available information about state extractive industries revenue collection will be included in the 2015 USEITI Report. Many states already provide extensive information about their extractive industries revenue via state websites and other reporting. However, this information was previously dispersed among a large number of state-specific websites and other information repositories. It has been, therefore, difficult for the public to access and compare data for multiple states. This data is collected and included in a more accessible manner in the 2015 USEITI online report. https://useiti.doi.gov/how-it-works/state-legal-fiscal-info/

[9] USEITI Update to the International Secretariat: Subnational Payments," n.d., https://www.doi.gov/sites/doi.gov/files/migrated/eiti/FACA/upload/USEITI-Subnational-Opt-In-Position-Piece-5-6-15-cleandrft.pdf

[10] https://useiti.doi.gov/case-studies/

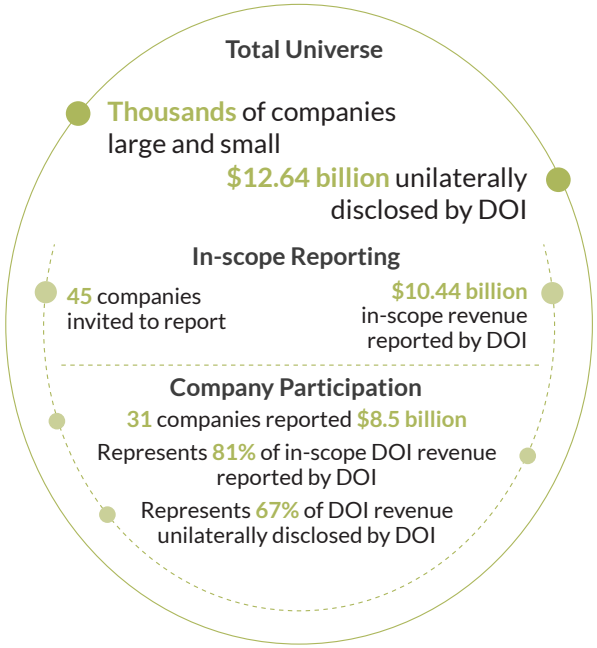
2015 USEITI Reporting and Reconciliation

Through a unilateral disclosure[11], DOI published online all in-scope revenue from extraction on federal lands by revenue stream and company for CY 2013. DOI reported a total of $12.64 billion in revenue, disclosing to the public 100% of in-scope DOI revenue from extraction on federal lands during CY 2013. In addition to DOI's unilateral disclosure, the MSG asked companies to report to the IA that same nontax information, revenue payments to DOI, as well as federal corporate income tax payments to or refunds from the Internal Revenue Service (IRS).

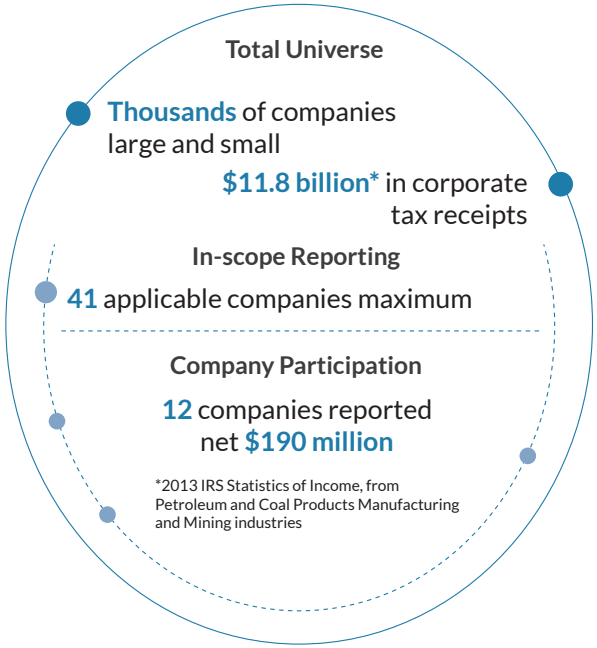
Reporting

Forty-five companies were asked to report. Thirty-one out of the 45 reported DOI revenue. Twelve out of a maximum of 41 applicable companies reported federal corporate income taxes.

2013 DOI Revenue Reporting



2013 Federal Corporate Income Taxes Reporting

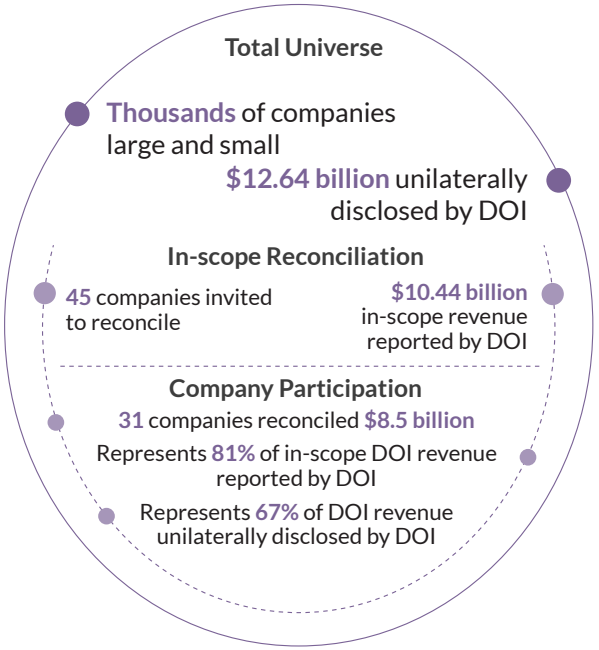


[11] https://useiti.doi.gov/explore/federal-revenue-by-company/

Reconciliation

Forty-five companies were asked to reconcile DOI revenue. Thirty one out of the 45 reconciled DOI revenue.

2013 DOI Revenue Reconciliation



The MSG applauds the five companies that additionally allowed for corporate income tax reconciliation: BP America, Cimarex Energy Co., Could Peak Energy Resources, LLC, Shell E&P Company, and W&T Offshore, Inc.

Reconciliation Results

After the IA compared and reconciled all included government revenue streams with company payments, 17 material variances remained, all of which were explained through the reconciliation process, leaving zero unexplained variances.

The MSG defined the parameters for reporting and reconciliation in the following manner:

Companies, Government Agencies, and Revenue Streams Included in the 2015 Reconciliation

Companies	Government Agencies, Bureaus, and Offices	Revenue Streams
Forty-four[1] companies that each paid at least $50 million in revenue to DOI in CY 2013	DOI's Office of Natural Resources Revenue (ONRR)	Bonuses
		Rents
		Royalties
		Other Revenue
		Offshore Inspection Fees
		Civil Penalties
	DOI's Bureau of Land Management (BLM)	Bonus and First Year Rentals
		Permit Fees
		Renewable Energy Collections
	DOI's Office of Surface Mining Reclamation and Enforcement (OSMRE)	Abandoned Mine Lands (AML) Fees, including Audits and Late Charges
		Civil Penalties, including Late Charges
	Internal Revenue Service (IRS)	Federal Corporate Income Taxes

[1]While only 44 companies met the materiality threshold, due to a calculation error, 45 companies were invited to participate in the reconciliation.

IA Recommendations and Next Steps

With the 2015 USEITI Report, the MSG has laid a foundation for EITI implementation to build on in subsequent years. The IA made recommendations to the MSG for future improvements. The complete list of recommendations is available starting on page 100 of this report. At a high level, the recommendations include:

- Revisiting what companies, commodities, and revenue to include to more thoroughly establish the comprehensiveness of the reconciliation
- Increasing company outreach to encourage and improve participation
- Proposing cost-effective reconciliation approaches to the EITI International Secretariat
- Enhancing the online report and developing additional state and local contextual information to drive public engagement
- Discussing and acting upon steps to increase participation in reporting and reconciliation

The MSG is committed to continuously improving USEITI implementation in subsequent years to provide US citizens with greater transparency and accountability regarding natural resource management and revenue.

2

NATURAL RESOURCES IN THE UNITED STATES

Natural Resources in the United States

Which natural resources are extracted in the United States? Where is extraction and exploration taking place?

The United States is home to many different natural resources, including fossil fuel, renewable energy, and nonenergy mineral resources. Since the nineteenth century, natural resource extraction has been a major industry in the United States, with fluctuations throughout time.

This 2015 USEITI Report focuses on the following natural resources that the MSG prioritized: energy resources, including both fossil fuels (i.e., oil, gas, and coal) and renewable energy sources (i.e., geothermal, solar, and wind), as well as nonenergy mineral resources (i.e., gold, copper, and iron). Future reports may include other resources, such as forests.

The US Energy Information Administration's (EIA) US Energy Mapping System helps to visualize the US supply of many of the natural energy resources discussed below. (http://www.eia.gov/state/maps.cfm?v=Fossil%20Fuel%20Resources)

Fossil Fuels

Fossil fuels are the main source of electricity in the United States, as well as the primary fuel for powering motor vehicles and heating homes. Fossil fuel resources comprised approximately 82% of total US energy consumption in 2013 (nuclear energy comprised 8%, and renewable energy 10%).[12] Besides creating energy, these natural resources are also used to make many products. For example, manufacturers use oil to make asphalt and coal to make steel. There are three main fossil fuels: oil, gas, and coal. Through natural processes over hundreds of millions of years, plant and animal matter becomes energy resources in the form of fossil fuels. While they are abundant, they are not renewable.

OIL forms in underground reservoirs on land and under the ocean. Crude oil occurs naturally, while petroleum products (e.g., jet fuel, diesel fuel, and heating oil) come from refining

[12] EIA, "Monthly Energy Review," Tables 1.3 and 10.1, May 2014, http://www.eia.gov/totalenergy/data/monthly/archive/00351405.pdf

and otherwise processing crude oil and other liquids. Petroleum is a broad term that can mean both crude oil and petroleum products. In 2013, five states—Texas, North Dakota, California, Alaska, and Oklahoma—and federal submerged lands in the Gulf of Mexico supplied more than 80% of the crude oil produced in the United States.[13]

GAS, also called natural gas, forms underground on land and offshore in beds under the ocean. There are two types of natural gas: "dry" and "wet." Dry natural gas is mostly methane. Wet natural gas contains a small amount of methane, as well as other liquid hydrocarbons—such as ethane, propane, and butane—and nonhydrocarbon gases. Wet natural gas is the source of natural gas liquids. Once wet natural gas is extracted from the ground, natural gas liquids are separated from the gas stream close to the well or at a gas processing plant. This leaves both dry gas and natural gas liquids such as ethane, propane, and butane. The United States produces more gas than any other country in the world. In 2013, five states produced 67% of the total dry natural gas in the United States: Texas, Pennsylvania, Louisiana, Wyoming, and Oklahoma.[14]

In conventional extraction, companies extract oil and gas by drilling a vertical well. At first, oil and gas rise to the surface of the well fueled by underground pressure. Once the pressure gives out, operators can inject gases or water from the initial drilling back into the formation to increase pressure and push additional resources to the surface, or install pumps to help provide artificial lift for oil production. Finally, operators can inject steam, gases, or other chemicals into the formation to change the oil's composition so that it can more easily rise through the well.

Extraction methods for oil and gas changed significantly starting in the early 2000s, with the new applications of

NATURAL RESOURCE SPOTLIGHT: **HELIUM**

Helium is a nonrenewable resource that is typically extracted from natural gas deposits. Helium has a variety of uses in the scientific, medical, technological, and defense industries.

After World War I, the federal government created the Federal Helium Program to ensure a dependable helium supply for defense-related purposes, and it remained the sole domestic producer of helium for decades. In 1960, the federal government began offering incentives for private companies to separate helium from natural gas and sell it back to the government for research and stockpiling purposes. When private demand outstripped public need, the helium industry was privatized in 1996, and BLM was charged with selling stockpiled helium to private refiners. BLM is committed to ensuring a smooth transition to private helium production as federal reserves are drawn down.

[13] EIA, "Five states and the Gulf of Mexico produce more than 80% of US crude oil," March 31, 2014, http://www.eia.gov/todayinenergy/detail.cfm?id=15631

[14] EIA, "Natural Gas Gross Withdrawals and Production," n.d., http://www.eia.gov/dnav/ng/ng_prod_sum_a_epg0_vgm_mmcf_a.htm

horizontal drilling and hydraulic fracturing, commonly known as "fracking." Horizontal drilling creates lateral wells for oil and gas to flow through. Hydraulic fracturing pumps water, sand, and chemicals into the earth to fracture the shale rock so that natural gas and oil can flow through the cracks into the well and then to the surface. These methods made extracting oil and gas trapped in almost impermeable shale rock formations deep below the surface of the earth profitable for extractive industries.

Additional information about shale gas can be found in the US Department of Energy's 2009 report, "Modern Shale Gas Development in the United States: A Primer" (http://energy.gov/sites/prod/files/2013/03/f0/ShaleGasPrimer_Online_4-2009.pdf)

In the past decade, these changing extraction methods and rising natural gas prices have made shale oil and gas increasingly attractive to extractive industries. Major oil and gas shale rock formations in the United States include the Permian, Haynesville, and Eagle Ford Regions mostly in Texas; the Marcellus Region in West Virginia, Pennsylvania, and New York; the Niobrara Region in Wyoming and Colorado; and the Bakken Region in North Dakota and Montana.

In addition to these shale formations, the Green River Formation, which is located at the intersection of Colorado, Utah, and Wyoming, is estimated to hold 1.44 trillion barrels of oil.[15] In shale gas, the Marcellus Play (spanning nine states from New York to Tennessee) is the largest shale gas play, accounting for 75% of natural gas production growth.[16] To see where oil and gas resources exist currently, as well as where exploration is taking place, visit the following:

A PLAY IS A GROUP OF OIL AND GAS FIELDS IN THE SAME REGION FORMED BY THE SAME GEOLOGICAL PROCESSES.

- A map of different types of oil and gas plays in the United States here[17]
- A map of current and prospective shale plays in the United States here[18]
- A map of undiscovered, technically recoverable gas resources here[19]
- A database of offshore exploration and development plans here[20]

[15] US Geological Survey, "Assessment of In-Place Oil Shale Resources of the Green River Formation, Greater Green River Basin in Wyoming, Colorado, and Utah," June 2011, http://pubs.usgs.gov/fs/2011/3063/pdf/FS11-3063.pdf

[16] EIA, "Outlook for US Shale Oil and Gas," p. 2, Adam Sieminski, January 4, 2014, http://www.eia.gov/pressroom/presentations/sieminski_01042014.pdf

[17] US Geological Survey, Energy Resource Program, n.d., http://energy.usgs.gov/OilGas/AssessmentsData/NationalOilGasAssessment.aspx#.Vb1ZePlVikr

[18] EIA, "Lower 48 state shale plays," April 13, 2015, http://www.eia.gov/oil_gas/rpd/shale_gas.pdf

[19] US Geological Survey, "Total Mean Undiscovered Gas Resources," March 2013, http://certmapper.cr.usgs.gov/data/noga00/natl/graphic/2013/total_mean_gas_2013.pdf

[20] Bureau of Ocean Energy Management, "Exploration and Development Plans Online Query," n.d., http://www.data.boem.gov/homepg/data_center/plans/plans/master.asp

COAL forms in the ground in coal seams or beds. Miners extract coal through surface and subsurface mining. In surface mining, the coal is close to the surface. Miners remove the "overburden," or the soil and rock covering the coal, before mining it. In subsurface mining, the coal is farther down in the earth. Through passages that go into the earth, miners remove the coal from underground "rooms" or long coal seams.[21] In 2013, the United States was the world's second largest coal producer after China. In the United States, coal is concentrated in three regions: the Appalachian Region, the Interior Region, and the Western Region. In recent years, the Western Region—most of which is the Powder River Basin— produced more than half of US coal.[22]

To see a map of the Appalachian, Interior, and Western coal regions, visit here (http://www.eia.gov/Energyexplained/index.cfm?page=coal_where)

Proved coal reserves estimate the quantity of coal that can be mined from existing reserves at active mines. From 2012 to 2013, proved coal reserves in the United States increased by 5.8%.[23]

Maps and information about where the United States gets its coal can be found here.[24] Information about coal reserves and a map of their locations can be found here.[25]

[21] Office of Energy and Economic Development, Bureau of Indian Affairs, "Coal Mining Technologies," n.d., http://teeic.indianaffairs.gov/er/coal/restech/tech/index.htm

[22] EIA, "Coal Explained: Where Our Coal Comes From," n.d., http://www.eia.gov/Energyexplained/index.cfm?page=coal_where

[23] EIA, "Table 14. Recoverable Coal Reserves and Average Recovery Percentage at Producing Mines by State, 2013 and 2012," n.d., http://www.eia.gov/coal/annual/pdf/table14.pdf

[24] EIA, "Coal Explained: Where Our Coal Comes From," n.d., http://www.eia.gov/energyexplained/index.cfm?page=coal_where

[25] EIA, "US Coal Reserves," n.d., http://www.eia.gov/coal/reserves/

WHAT ARE RESERVES?

There are three common types of reserves, or the amount of a particular natural resource available for extraction:

- Proved reserves are the estimated volumes of a natural resource that geological and engineering data demonstrate with reasonable certainty to be recoverable in future years from known reservoirs under existing economic and operating conditions
- Technically recoverable resources include all of the natural resources that can be produced based on current technology, industry practices, and geological knowledge
- Economically recoverable resources are the portion of technically recoverable natural resources that can be profitably produced

Renewable Energy Resources

Renewable energy resources include geothermal, solar, wind, biomass, and hydrokinetic energy, all of which constitute growing sources of environmentally sustainable energy to meet the country's electricity needs. Renewable energy sources comprised approximately 10% of total US

energy consumption in 2013.[26] This year's report features geothermal, solar, and wind.

GEOTHERMAL energy comes from the earth's heat, which is captured as steam or hot water and converted into energy. Most geothermal resources are found along the boundaries of tectonic plates and manifest themselves as volcanoes, hot springs, or geysers. California produces more geothermal energy than any other state, accounting for more than 75% of the country's total geothermal output in 2013.[27]

Many sites for potential geothermal development are on federal land; currently, about 40% of all US geothermal energy capacity is on leased federal lands.[28] In addition to these known sources, advances in extraction methods and technology could result in new sources of geothermal energy.

A map focused on the production of geothermal energy can be seen here.[29]

SOLAR energy can be generated in two ways: either by converting solar radiation into heat and electricity via photovoltaic panels or by using the sun's radiation to heat a fluid and produce steam for a power generator.

California leads the country in producing solar energy, followed by New Jersey.[30] As of 2014, California is the first state to receive 5% or more of its electricity from solar energy sources.[31]

The solar industry has experienced rapid growth in the past decade due to government programs such as tax credits and state renewable portfolio standards,[32] increased public awareness of its environmental benefits, and decreasing technology costs. Manufacturing costs for solar panels have decreased by 80%,[33] and private industry has created better batteries to store solar energy. In the southwestern United States, solar radiation levels are some of the best in the world for solar energy production. Currently, there are 70 pending applications to develop solar energy projects on federal lands.[34]

A map illustrating areas of the United States with solar energy potential can be seen here.[35]

WIND power takes advantage of daily wind cycles to rotate wind turbines, which can be clustered together on wind

[26] EIA, "Monthly Energy Review," Table 1.3 and 10.1, May 2014, http://www.eia.gov/totalenergy/data/monthly/archive/00351405.pdf

[27] EIA, "Today in Energy: Geothermal resources used to produce renewable electricity in western states," September 8, 2014, http://www.eia.gov/todayinenergy/detail.cfm?id=17871

[28] Bureau of Land Management, "Geothermal Energy," n.d., http://www.blm.gov/wo/st/en/prog/energy/geothermal.html

[29] National Renewable Energy Laboratory, "Geothermal Resources of the United States," Billy J. Roberts, October 13, 2009, http://www.nrel.gov/gis/images/geothermal_resource2009-final.jpg

[30] Bureau of Labor Statistics, "Careers in Solar Power," James Hamilton, n.d., http://www.bls.gov/green/solar_power/

[31] EIA, "Today in Energy: California first state to generate more than 5% of electricity from utility-scale solar," March 24, 2015, http://www.eia.gov/todayinenergy/detail.cfm?id=20492

[32] EIA, "Annual Energy Outlook 2015: With Projections to 2040," p. ES–7, April 2015, http://www.eia.gov/forecasts/aeo/pdf/0383(2015).pdf

[33] CNBC, "Like shale oil, solar power is shaking up global energy," April 26, 2015, http://www.cnbc.com/id/102621070

[34] BLM, "Solar Energy," September 25, 2015, http://www.blm.gov/wo/st/en/prog/energy/solar_energy.html

[35] US Department of Energy, "Solar Energy Potential," n.d., http://energy.gov/maps/solar-energy-potential

farms. In 2013, wind power accounted for more than 4% of total US energy production, with more than 61 gigawatts (GW) installed across 39 states.[36] Texas (12.3 GW), California (5.8 GW), and Iowa (5.2 GW) are the leading producers.[37]

No offshore wind projects in the United States have been completed to date. The National Renewable Energy Laboratory[38] estimated in 2012 that there is enough wind energy potential offshore to generate four times the electricity held by the US power grid.[39] While wind speeds off the Atlantic Coast and in the Gulf of Mexico are lower than in the Pacific, the presence of shallower waters in the Atlantic makes developing wind projects there more affordable in the short term.[40] To date, the Bureau of Ocean Energy Management (BOEM) has issued nine commercial wind energy leases on the Atlantic Outer Continental Shelf, including those offshore of Delaware, Maryland, Massachusetts, Rhode Island, and Virginia.[41] BOEM expects to hold lease sales for areas offshore of New Jersey and North Carolina in the near future and is considering a number of other commercial wind energy planning areas.[42]

A map of the wind power capacity currently installed in the United States can be seen here,[43] a map of the wind power potential onshore can be seen here,[44] and a map of the wind power potential offshore can be seen here.[45]

Nonenergy Minerals

Nonenergy minerals found in the United States include base and precious metals, industrial metals, and gemstones, amongst others. The 2015 USEITI Report focuses on nonenergy minerals, specifically gold, copper, and iron. In 2013, these minerals accounted for most of the valuable metal produced in the United States: gold, copper, and iron made up 32%, 29%, and 17%, respectively, of $32 billion worth of metal extracted.[46]

The 2013 estimated exploration budget for nonenergy minerals in the United States decreased by 38% from 2012, dropping from $1.7 billion to $1 billion. Continued uncertainty about the US and European economies, as well as weakened demand from China, either depressed or maintained prices for nonenergy minerals. Noteworthy exploration sites for nonenergy minerals are located in Alaska, Idaho, Nevada, and Wyoming, more than half of which are for gold and silver.[47]

[36] US Department of Energy, "Wind Vision: A New Era for Wind Power in the United States," p. 2, March 2015, http://www.energy.gov/sites/prod/files/wind_vision_highlights.pdf

[37] Ibid.

[38] National Renewable Energy Laboratory, n.d., http://www.nrel.gov/

[39] BOEM, "Offshore Wind Energy," n.d., http://www.boem.gov/renewable-energy-program/renewable-energy-guide/offshore-wind-energy.aspx; and National Renewable Energy Laboratories, "US Renewable Energy Technical Potentials: A GIS-Based Analysis," Anthony Lopez, Billy Roberts, Donna Heimiller, Nate Blair, and Gian Porro, July 2012, http://www.nrel.gov/docs/fy12osti/51946.pdf

[40] BOEM, "Offshore Wind Energy," n.d., http://www.boem.gov/renewable-energy-program/renewable-energy-guide/offshore-wind-energy.aspx

[41] BOEM, "Lease and Grant Information," n.d., http://www.boem.gov/Lease-and-Grant-Information/

[42] BOEM, "North Carolina Activities," n.d., http://www.boem.gov/state-activities-north-carolina/; and BOEM, "New Jersey Activities," n.d., http://www.boem.gov/State-Activities-New-Jersey/

[43] US Department of Energy, "WINDExchange: Installed Wind Capacity," n.d., http://apps2.eere.energy.gov/wind/windexchange/wind_installed_capacity.asp

[44] US Department of Energy, "WINDExchange: Utility-Scale Land-Based 80-Meter Wind Maps," n.d., http://apps2.eere.energy.gov/wind/windexchange/wind_maps.asp

[45] US Department of Energy, "WINDExchange: Offshore 90-Meter Wind Maps and Wind Resource Potential," n.d., http://apps2.eere.energy.gov/wind/windexchange/windmaps/offshore.asp

[46] USGS, "Mineral Commodity Summaries 2014," p. 7, February 28, 2014, http://minerals.usgs.gov/minerals/pubs/mcs/2014/mcs2014.pdf

[47] US Geological Survey, "Annual Review 2013: Exploration Review," 2013, p. 27, 37–39, D.R. Wilburn and K.A. Stanley, May 2014, http://minerals.usgs.gov/minerals/mflow/exploration-2013.pdf

GOLD can be found in both loose materials and hard rocks. Miners extract gold from placer mines using sluicing, dredging, jigging, and amalgamation devices that separate the gold from water, silt, rock, and other compounds. Lode mining, both open pit and underground, extracts gold embedded within rock walls. Once mined, gold is used to make jewelry, electronics, dental treatments, and other products. In 2013, the majority of US gold came from Nevada (172,000 kilograms) and Alaska (30,600 kilograms).[48] In Nevada, recent exploration for gold resulted in discoveries along the Carlin and Battle Mountain-Eureka (Cortez) trends in Eureka and Elko Counties, as well as in the Pequop Mountains in Elko County.[49] Alaska continues to be a prominent site for gold exploration, although exploration spending in the state in 2013 made up less than half the peak expenditure in 2011.[50] Half of the estimated 2013 total $1 billion US budget for nonenergy mineral exploration was for gold.[51]

COPPER is found in hard rocks in the form of copper ore. Miners extract copper from open pit and underground mines through traditional quarrying to separate the copper from rock, or leaching which involves treating the ore with diluted sulfuric acid. Once produced, copper has a variety of uses, including as a building material, as an effective conductor of electricity, and within the health care sector. In 2013, Arizona accounted for the most copper production out of all US states with 795,000 metric tons.[52] In terms of exploration, an estimated 36% of the 2013 total $1 billion US budget for nonenergy mineral exploration was for base metals, primarily copper.[53]

IRON is found in underground rocks. Miners extract iron by drilling holes in the ground in carefully engineered patterns and blasting out rocks with explosives. Next, miners crush the rocks and separate out the iron ore from other materials. Almost all iron is used to make steel, which in turn is used to make buildings, infrastructure, machines, and vehicles. In 2013, 99% of the iron ore shipped in the United States came from Minnesota and Michigan.[54] Exploration continues on the Mesabi Iron Range in Minnesota;[55] in 2013, companies drilled nearly 200 exploratory holes for iron along the Mesabi Range.[56]

[48] US Geological Survey, "Monthly Industry Surveys: Gold in November and December 2013," p. 2, March 2014, http://minerals.usgs.gov/minerals/pubs/commodity/gold/mis-201311_12-gold.pdf

[49] Nevada Bureau of Mines and Geology, "The Nevada Mineral Industry 2011," p. 8, John L. Muntean, David A. Davis, Lisa Shevenell, Richard Zehner, 2013, http://pubs.nbmg.unr.edu/The-NV-mineral-industry-2011-p/mi2011.htm

[50] US Geological Survey, "Annual Review 2014: Exploration Review," p. 35–36, D.R. Wilburn, K.A. Stanley, and N.A. Karl, May 2015, http://minerals.er.usgs.gov/minerals/mflow/exploration-2014.pdf

[51] US Geological Survey, "Annual Review 2013: Exploration Review," p. 37, D.R. Wilburn and K.A. Stanley, May 2014, http://minerals.usgs.gov/minerals/mflow/exploration-2013.pdf

[52] US Geological Survey, "Mineral Industry Surveys: Copper in January 2014," p. 3, June 2014, http://minerals.usgs.gov/minerals/pubs/commodity/copper/mis-201401-coppe.pdf

[53] US Geological Survey, "Annual Review 2013: Exploration Review" p. 37, D.R. Wilburn and K.A. Stanley, May 2014, http://minerals.usgs.gov/minerals/mflow/exploration-2013.pdf

[54] US Geological Survey, "Mineral Commodity Summaries: Iron Ore," p. 84, Christopher A. Tuck, February 2014, http://minerals.usgs.gov/minerals/pubs/commodity/iron_ore/mcs-2014-feore.pdf

[55] US Department of Energy, "WINDExchange: Installed Wind Capacity," n.d., http://apps2.eere.energy.gov/wind/windexchange/wind_installed_capacity.asp

[56] Minnesota Department of Natural Resources, "Exploration Drilling Map for Metallic Minerals by Company in 2013," n.d., http://files.dnr.state.mn.us/lands_minerals/mineral_faq/mn_expdrilling_map_2013.pdf

3

GOVERNANCE OF US NATURAL RESOURCE EXTRACTION

Governance of US Natural Resource Extraction

Who owns land and natural resources in the United States?

Land Ownership

Natural resource ownership in the United States is closely tied to land ownership. There are four main types of land owners in the United States: (1) citizens and corporations, (2) the federal government, (3) state and local governments, and (4) Indian tribes and individuals. There are two types of owners for the submerged lands under the ocean surrounding the United States: states and the federal government.

The following lists the different lands held by these different owners in the United States:

PRIVATE LANDS: Lands owned by private citizens or corporations

FEDERAL LANDS[57]: Lands owned by or under jurisdiction of the federal government, including:

- Public domain lands ceded to the United States by treaty, purchase, or conquest
- Acquired lands purchased by, given to, exchanged with, or transferred through condemnation proceedings to the federal government
- Military acquired lands purchased by the federal government under military acquisition laws
- Outer Continental Shelf submerged lands located farther than three miles off a state's coastline, or three marine leagues into the Gulf of Mexico off of Texas and Western Florida[58]

STATE AND LOCAL LANDS: Lands owned by state or local governments, including:

- State lands owned by a particular state
- State submerged lands under the ocean stretching from a state's coast to three miles out into the ocean, or in the case of Texas and western Florida, from the

[57] Congressional Research Service, "Federal Land Ownership: Overview and Data," p. 2, footnote 4, Ross W. Gorte, Carol Hardy Vincent, Laura A Hanson, Mark R. Rosenblum, February 8, 2012, http://fas.org/sgp/crs/misc/R42346.pdf

[58] BOEM, "OCS Lands Act History," Lands beneath navigable waters belong to states and are defined as extending three geographical miles from the coastline into the Arctic Ocean, the Atlantic Ocean, the Pacific Ocean, and the Gulf of Mexico, as well as extending from the coastline three marine leagues into the Gulf of Mexico off Texas and western Florida, http://www.boem.gov/OCS-Lands-Act-History/

coast out to three marine leagues into the Gulf of Mexico[59]

- Local lands owned by a local government, such as a county

INDIAN LANDS: Lands owned by Indians, including:

- Tribal lands held in trust by the federal government for a tribe's use
- Indian allotments held in trust by the federal government for individual Indians' use
- Alaska Native Corporation lands in Alaska, held by 12 regional Alaska Native Corporations that received rights to some surface lands, as well as rights to natural resources below the surface. In addition to these 12 regional Alaska Native Corporations, certain village-level Alaska Native Corporations hold additional surface land rights[60]

Natural Resource Ownership

In the United States, private individuals and corporations, as well as federal, state, local, and tribal governments, can own both land and the oil, gas, coal, and other minerals found below the surface. In fact, widespread private ownership of oil, gas, coal, and minerals makes the United States different from nearly every other country in which these resources simply belong to the national government.

Natural resource ownership in the United States has historical roots in the nineteenth century, when the federal government passed homestead and development acts to encourage settlement in the western United States. These acts, along with the General Mining Law of 1872, allowed for federal public domain lands, and the natural resources within them, to pass to private ownership. Starting in the twentieth century, the United States passed legislation that began to withdraw both specific natural resources and eventually public domain lands from settlement and other development, preserving these lands and natural resources in federal ownership today.

SUBMERGED LANDS UNDER THE OCEAN ARE CALLED OFFSHORE LANDS, WHILE LANDS ABOVE THE OCEAN ARE CALLED ONSHORE LANDS.

Sometimes in the United States, the land's surface owner is different from the owner of the minerals in the ground below. The party that owns the land's surface has surface rights, while the party that owns the natural resources in the ground has subsurface rights. When ownership is divided in this way, it is referred to as a split estate.[61] There are 57 million acres of land in the United States where the

[59] BOEM, Submerged Lands Act, http://www.boem.gov/uploadedfiles/submergedla.pdf

[60] US Government Accountability Office, "Regional Alaska Native Corporations: Status 40 Years After Establishment and Future Considerations," p. 5–6, December 2012, http://www.gao.gov/assets/660/650857.pdf

[61] BLM, "Split Estate," n.d., http://www.blm.gov/wo/st/en/prog/energy/oil_and_gas/best_management_practices/split_estate.html

federal government owns oil, gas, coal, and other minerals below the surface, but another party, mostly citizens or corporations, owns the surface land above.[62] Land and mineral ownership can become quite complicated in the United States. Often, a combination of private landholders, the federal government, a state government, or Indian tribes own the span of a single mine or field.

When it comes to the natural resources found off the US coast, the federal government and state governments split ownership. In general, states have primary authority and natural resource ownership in the three-mile area extending outward from their coasts. The federal government owns oil, gas, and minerals located in the submerged lands on the Outer Continental Shelf, which extend from the states' offshore boundaries out to at least 200 nautical miles from the shore.

What are the federal laws, regulations, and reforms governing natural resource extraction in the United States?

Federal Laws and Regulations

The legislative branch of the federal government has passed many laws that govern natural resource extraction on federal lands in the United States. The following table lists the laws that provide the backbone of the fiscal regime for the extractive industries, as well as the relevant lands and natural resources to which they apply.

IN ADDITION TO FEDERAL LAWS, EXTRACTIVE INDUSTRIES COMPANIES MUST COMPLY WITH STATE AND LOCAL LAWS. TO LEARN MORE ABOUT THESE LAWS, VISIT A LIST OF STATE WEBSITES WITH LINKS TO LEGAL INFORMATION HERE.

[62] BLM, "Leasing of Onshore Federal Oil and Gas Resources," n.d., http://www.blm.gov/wo/st/en/prog/energy/oil_and_gas/leasing_of_onshore.html

Select Laws Establishing the Fiscal Regime for Extractive Industries in the United States

Law Name and Code	Description	Relevant Lands	Relevant Natural Resources
The General Mining Law of 1872 as Amended[1] (30 USC § 29 et seq. and 43 CFR 3860)	Provides the right to patent, meaning transfer to private ownership, federal lands and natural resources for mining. Since October 1, 1994, Congress has imposed a budget moratorium on any new mineral patent applications.	Federal onshore (public domain)	Locatable hardrock minerals (e.g., gold, silver, and copper)
Leasing of Allotted Lands for Mining Purposes Act of 1909[2] (25 USC § 396 et seq. and 25 CFR 212)	States that all lands allotted to Indians, except those made to members of the Five Civilized Tribes and Osage, may be leased for mining purposes for any term of years as may be deemed advisable by the Secretary of the Interior.	Indian (allotted)	Not specified
Mineral Leasing Act of 1920 as Amended[3] (30 USC § 181 et seq.)	Creates a system of leasing mineral resources on federal lands for extraction and grants BLM authority to administer mineral leasing.	Federal onshore (public domain)	Coal, oil, gas, oil or gas shale, sodium, potassium, phosphate, sulfur, and gilsonite
Indian Mineral Leasing Act of 1938[4] (25 USC § 396a et seq.)	Opens unallotted lands within any Indian reservation for leasing for mining purposes by authority of the tribal council and approval of the Secretary of the Interior.	Indian (tribal)	Not specified
Mineral Leasing Act for Acquired Lands of 1947[5] (30 USC § 351 et seq. and 43 CFR 3420)	Extends the Mineral Leasing Act of 1920 and authority of the Secretary of the Interior to govern mineral leasing on federal acquired lands.	Federal onshore (acquired)	Coal, oil, gas, oil or gas shale, sodium, potassium, phosphate, sulfur, and gilsonite

[1] US Department of Energy, "WINDExchange: Installed Wind Capacity," n.d., http://apps2.eere.energy.gov/wind/windexchange/wind_installed_capacity.asp

[2] Leasing of Allotted Lands for Mining Purposes Act of 1909, http://www.gpo.gov/fdsys/pkg/USCODE-2011-title25/pdf/USCODE-2011-title25-chap12-sec396.pdf

[3] Mineral Leasing Act of 1920 as Amended, http://www.blm.gov/pgdata/etc/medialib/blm/wo/Communications_Directorate/legislation.Par.23212.File.dat/mla_1920_amendments1.pdf

[4] Indian Mineral Leasing Act of 1938, http://www.gpo.gov/fdsys/pkg/USCODE-2009-title25/html/USCODE-2009-title25-chap12.htm

[5] Mineral Leasing Act for Acquired Lands of 1947, http://www.blm.gov/pgdata/etc/medialib/blm/wo/Communications_Directorate/legislation.Par.23212.File.dat/mla_1920_amendments1.pdf#page=56

Select Laws Establishing the Fiscal Regime for Extractive Industries in the United States (*continued*)

Law Name and Code	Description	Relevant Lands	Relevant Natural Resources
Mineral Materials Act of 1947[6] (30 USC § 601 et seq.)	Also known as the Common Varieties Act, regulates the sale and permitting of the most common hardrock minerals in place of the General Mining Law of 1872.	Federal onshore	Common hardrock minerals (e.g., sand, gravel, stone, pumice, cinders)
Submerged Lands Act of 1953[7] (43 USC § 1301 et seq.)	Recognizes states' rights to the submerged navigable lands within their boundaries, as well as the marine waters within their boundaries, often defined as three geographical miles from the coastline.	State offshore	All natural resources
Outer Continental Shelf Lands Act of 1953 as Amended[8] (43 USC § 1331 et seq.)	Gives the Secretary of the Interior responsibility for administering mineral and energy resources exploration, development, and production on the Outer Continental Shelf, subject to environmental safeguards. Mandates receipt of fair market value for mineral leasing.	Outer Continental Shelf	Oil, gas, and other minerals
Geothermal Steam Act of 1970[9] (30 USC § 1001 et seq.)	Allows the leasing of federal lands under BLM's administration for geothermal resource development, excluding prohibited lands.	Federal onshore	Geothermal
Mining and Minerals Policy Act of 1970[10] (30 USC § 21a et seq.)	Amends the Mining Act of 1920. Establishes the national interest to develop a domestic private enterprise mining industry, while addressing adverse environmental impacts.	Federal onshore	All natural resources

[6] Mineral Materials Act of 1947, http://legcounsel.house.gov/Comps/Act%20Of%20July%2031,%201937-(Materials%20Act%20Of%201947).pdf

[7] Submerged Lands Act of 1953, http://www.boem.gov/uploadedFiles/submergedLA.pdf

[8] Outer Continental Shelf Lands Act of 1953 as Amended, http://www.gpo.gov/fdsys/pkg/USCODE-2010-title43/html/USCODE-2010-title43-chap29-subchapIII.htm

[9] Geothermal Steam Act of 1970, http://www.gpo.gov/fdsys/pkg/STATUTE-84/pdf/STATUTE-84-Pg1566.pdf

[10] Mining and Minerals Policy Act of 1970, http://www.gpo.gov/fdsys/pkg/USCODE-2011-title30/pdf/USCODE-2011-title30-chap2-sec21a.pdf

Law Name and Code	Description	Relevant Lands	Relevant Natural Resources
Federal Coal Leasing Amendments Act (FCLAA) of 1976[11] (90 STAT 1083)	Amends Section 2 of the Mineral Leasing Act of 1920. Requires all public lands available for coal leasing to be leased competitively, the government to only accept lease bids equal to or greater than fair market value, the consolidation of leasing into logical mining units, lease holders to continually operate, and other measures.	Federal onshore	Coal
Surface Mining Control and Reclamation Act (SMCRA) of 1977[12] (30 USC § 1201 et seq.)	Creates the Office of Surface Mining, Reclamation, and Enforcement (OSMRE) to establish a nationwide program to protect society and the environment from the adverse effects of surface coal mining operations, under which OSMRE is charged with balancing the nation's need for continued domestic coal production with protection of the environment; requires coal mine owners to post bonds as insurance for reclaiming the land after current mining operations, and requires them to pay into the Abandoned Mine Reclamation Fund, a fund intended to address mines abandoned prior to 1977.	Federal onshore	Coal
Federal Oil and Gas Royalty Management Act (FOGRMA) of 1982[13] (30 USC § 1701 et seq.)	Grants the Secretary of the Interior authority for managing and collecting oil and gas royalties from leases on federal and Indian lands.	Federal onshore, Indian, and Outer Continental Shelf	Oil and gas
Indian Mineral Development Act of 1982[14] (25 USC §§ 2101–2108 et seq.)	Provides Indian tribes with flexibility in the development and sale of mineral resources, including opportunities to enter into joint venture agreements with mineral developers.	Indian (tribal)	Oil and gas, coal, geothermal, and other mineral resources

[11] Federal Coal Leasing Amendments Act of 1975, http://www.gpo.gov/fdsys/pkg/STATUTE-90/pdf/STATUTE-90-Pg1083.pdf

[12] Surface Mining Control and Reclamation Act of 1977, http://www.gpo.gov/fdsys/pkg/STATUTE-91/pdf/STATUTE-91-Pg445.pdf

[13] Federal Oil and Gas Royalty Management Act of 1982, http://www.boem.gov/uploadedFiles/BOEM/Oil_and_Gas_Energy_Program/Leasing/Outer_Continental_Shelf/Lands_Act_History/federal%20og%20royalty%20mgmt.pdf

[14] Indian Mineral Development Act of 1982, http://www.gpo.gov/fdsys/pkg/STATUTE-96/pdf/STATUTE-96-Pg1938.pdf

Select Laws Establishing the Fiscal Regime for Extractive Industries in the United States (*continued*)

Law Name and Code	Description	Relevant Lands	Relevant Natural Resources
Federal Onshore Oil and Gas Leasing Reform Act (FOOGLRA) of 1987[15] **(30 USC § 181 et seq.)**	Amendment to the Mineral Leasing Act of 1920. Gives the US Forest Service the authority to proactively offer leases for oil and gas on National Forest System lands provided environmental and other land-use regulations are met. BLM largely administers leasing on these lands.	Federal onshore	Oil and gas
Federal Oil and Gas Royalty Simplification and Fairness Act (RSFA) of 1996[16] **(30 USC § 1701 et seq.)**	Improves royalty management from federal and Outer Continental Shelf oil and gas leases.	Federal onshore and Outer Continental Shelf	Oil and gas
Energy Policy Act (EPAct) of 2005[17] **(42 USC § 13201 et seq.)**	Addresses energy production in the United States, including the production, transportation, and transmission of energy on the Outer Continental Shelf from sources other than oil and gas (e.g., wind energy); incentives for oil and gas development; and provisions to access oil and gas resources on federal lands.	Federal onshore and Outer Continental Shelf	Oil, gas, coal, wind, solar, hydropower, and geothermal
Gulf of Mexico Energy Security Act (GOMESA) of 2006[18] (120 Stat. 2922)	Opens 8.3 million acres in the Gulf of Mexico for oil and gas leasing, shares leasing revenue with gulf producing states and the Land and Water Conservation Fund, and bans oil and gas leasing within 125 miles off the Florida coastline in the Eastern Planning Area and a portion of the Central Planning Area until 2022.	Outer Continental Shelf	Oil and gas

[15] Federal Onshore Oil and Gas Leasing Reform Act of 1987, p. 34, http://www.gpo.gov/fdsys/pkg/USCODE-2011-title30/pdf/USCODE-2011-title30.pdf

[16] Federal Oil and Gas Royalty Simplification and Fairness Act of 1996, http://www.onrr.gov/laws_r_d/PubLaws/PDFDocs/rsfa.pdf

[17] Energy Policy Act of 2005, http://www.gpo.gov/fdsys/pkg/BILLS-109hr6enr/pdf/BILLS-109hr6enr.pdf

[18] Gulf of Mexico Energy Security Act of 2006, http://www.boem.gov/Oil-and-Gas-Energy-Program/Energy-Economics/econ/GOMESA-pdf.aspx

There are other laws governing natural resources and extractive companies' operations. Some of these laws require companies to pay fees. Violating some of these laws can also result in companies paying fines.

Select Laws Resulting in Fees or Fines for Extractive Industries Companies in the United States

Law Name and Code	Description	Relevant Lands	Relevant Natural Resources
Federal Land Policy and Management Act (FLPMA) of 1976 as Amended[19] (43 USC § 1701 et seq.)	Requires BLM to administer federal lands using a land-use planning framework that includes no unnecessary or undue degradation; multiple-use, sustained yield considerations for present and future generations; and public planning. Requires receipt of fair market value for use of federal lands and resources.	Federal onshore and Indian	All natural resources
Clean Air Act (CAA) of 1970[20] (42 USC § 7401 et seq.)	Outlines steps that federal agencies, state and local governments, and industry must take to decrease air pollution. Oil and gas wells are exempt from legal aggregation, whereby the emissions from small sites that are connected, in close proximity or under shared ownership, are added together and regulated as "stationary sources" if they emit or could emit 100 tons per year of a pollutant.	All lands	All natural resources, except when oil and gas are exempted
Clean Water Act (CWA) of 1977[21] (33 USC § 1251 et seq.)	Establishes a regulatory framework to protect water quality and monitor discharges of pollutants into waters in the United States. The US Environmental Protection Agency (EPA) does not require National Pollutant Discharge Elimination System (NPDES) permits for uncontaminated storm water discharges from oil and gas exploration, production, processing or treatment operations; transmission; or drill site preparation.[22]	All lands	All natural resources, except when oil and gas are exempted

[19] Federal Land Policy and Management Act of 1976 as Amended, http://www.blm.gov/flpma/FLPMA.pdf

[20] Clean Air Act of 1970, http://www.gpo.gov/fdsys/pkg/USCODE-2008-title42/pdf/USCODE-2008-title42-chap85.pdf

[21] Clean Water Act of 1977, http://www.gpo.gov/fdsys/pkg/USCODE-2010-title33/pdf/USCODE-2010-title33-chap26.pdf

[22] EPA, "Regulation of Oil and Gas Construction Activities," March 9, 2009, http://water.epa.gov/polwaste/npdes/stormwater/Regulation-of-Oil-and-Gas-Construction-Activities.cfm

Select Laws Resulting in Fees or Fines for Extractive Industries Companies in the United States (*continued*)

Law Name and Code	Description	Relevant Lands	Relevant Natural Resources
Safe Drinking Water Act (SDWA) of 1974[24] (42 USC §§ 300f–300j et seq.)	Protects public health by regulating the nation's public drinking water supply and its sources. As of the 2005 Energy Policy Act, hydraulic fracturing fluids are exempt from underground injection control permits unless diesel fuel is used in the extraction process.[25]	All lands	All natural resources, except when oil and gas are exempted
Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) of 1980[26] (42 USC §§ 9601–9675 et seq.)	Provides a federal 'superfund' to clean up uncontrolled or abandoned hazardous-waste sites, as well as accidents, spills, and other emergency releases of pollutants and contaminants into the environment, and gives EPA the power to seek out those parties responsible for any release and assure their cooperation in the cleanup.	All lands	All natural resources, except when oil and gas are exempted
Endangered Species Act (ESA) of 1973[27] (16 USC § 1531 et seq.)	Protects and recovers imperiled species and the ecosystems upon which they depend.	All lands	All natural resources
Marine Mammal Protection Act of 1972 as Amended[28] (16 USC § 1361 et seq.)	Prohibits, with certain exceptions, the "take" of marine mammals in US waters and by US citizens on the high seas, and the importation of marine mammals and marine mammal products into the United States.	All lands	All natural resources, except when oil and gas are exempted

[23] Safe Drinking Water Act of 1974, http://www.epw.senate.gov/sdwa.pdf

[24] EPA, "Regulation of Hydraulic Fracturing Under the Safe Drinking Water Act," n.d., http://water.epa.gov/type/groundwater/uic/class2/hydraulicfracturing/wells_hydroreg.cfm

[25] Comprehensive Environmental Response, Compensation, and Liability Act of 1980, http://www.epw.senate.gov/cercla.pdf

[26] Endangered Species Act of 1973, http://www.nmfs.noaa.gov/pr/pdfs/laws/esa.pdf

[27] Marine Mammal Protection Act of 1972 as Amended, http://www.nmfs.noaa.gov/pr/pdfs/laws/mmpa.pdf

There are many other laws with which extractive industries companies must comply. DOI, EPA, the National Oceanic and Atmospheric Administration (NOAA), and other federal agencies' websites contain more comprehensive lists of related laws that they enforce:

- DOI BOEM: http://www.boem.gov/Regulations/BOEM-Governing-Statutes.aspx
- DOI Bureau of Safety and Environmental Enforcement (BSEE): http://www.bsee.gov/Regulations-and-Guidance/BSEE-Governing-Statutes/
- DOI BLM: http://www.blm.gov/wo/st/en/info/regulations.html
- EPA: http://www2.epa.gov/laws-regulations/laws-and-executive-orders#majorlaws
- OSMRE: http://www.osmre.gov/lrg.shtm
- NOAA: http://www.nmfs.noaa.gov/ole/about/what_we_do/laws.html
- In addition, the online report contains a curated search of relevant laws available via the search box on the website.

Federal agencies, such as DOI and relevant bureaus, implement these laws by developing and enforcing regulations and rules. The following section lists key regulations related to natural resource extraction in the United States, particularly on federal and Indian lands:

- Title 25[63] in the Code of Federal Regulations relates to sovereign Indian nations. Subchapter I deals with energy and minerals (Parts 200–227).
- Title 30[64] governs mineral resources. Chapter II[65] deals with the BSEE; Chapter V[66] deals with BOEM; Chapter VII[67] deals with OSMRE; Chapter XII[68] deals with ONRR.
- Title 43[69] in the Code of Federal Regulations governs public lands. Subchapter C focuses on minerals management (Parts 3000–3870).

[63] US Government Publishing Office, "Title 25: Indians," n.d., http://www.gpo.gov/fdsys/search/pagedetails.action?collectionCode=CFR&searchPath=Title+25%2FChapter+I%2FSubchapter+I&granuleId=&packageId=CFR-2008-title25-vol1&oldPath=Title+25%2FChapter+I%2FSubchapter+A&fromPageDetails=true&collapse=true&ycord=435

[64] US Government Publishing Office, "Title 30, Mineral Resources," n.d., http://www.ecfr.gov/cgi-bin/text-idx?SID=784ea268c892a669424da1512740a933&mc=true&tpl=/ecfrbrowse/Title30/30tab_02.tpl

[65] US Government Publishing Office, Chapter II: Bureau of Safety and Environmental Enforcement, Department of the Interior, n.d., http://www.ecfr.gov/cgi-bin/text-idx?SID=050aa7804f2ee861c64ba348d17a79c1&mc=true&tpl=/ecfrbrowse/Title30/30cfrv2_02.tpl#0

[66] US Government Publishing Office, Chapter V: Bureau of Ocean Energy Management, Department of the Interior, n.d., http://www.ecfr.gov/cgi-bin/text-idx?SID=050aa7804f2ee861c64ba348d17a79c1&mc=true&tpl=/ecfrbrowse/Title30/30cfrv2_02.tpl#500

[67] US Government Publishing Office, Chapter VII: Office of Surface Mining Reclamation and Enforcement, Department of the Interior, n.d., http://www.ecfr.gov/cgi-bin/text-idx?SID=050aa7804f2ee861c64ba348d17a79c1&mc=true&tpl=/ecfrbrowse/Title30/30cfrv3_02.tpl#0

[68] US Government Publishing Office, Chapter XII: Office of Natural Resource Revenue, Department of the Interior, n.d., http://www.ecfr.gov/cgi-bin/text-idx?SID=050aa7804f2ee861c64ba348d17a79c1&mc=true&tpl=/ecfrbrowse/Title30/30cfrv3_02.tpl#1200

[69] US Government Publishing Office, "Title 3, Public Lands: Interior," n.d., http://www.ecfr.gov/cgi-bin/text-idx?tpl=/ecfrbrowse/Title43/43tab_02.tpl

Implementing laws includes complying with the National Environmental Policy Act (NEPA) of 1969[70] **(42 USC § 4321 et seq.).** NEPA is intended to ensure that decision makers and the public have information about the potential impacts to the environment of proposed federal actions and alternatives to those actions. When taking any major action, such as leasing natural resources on federal lands for extraction, federal agencies must prepare Environmental Assessments (EAs) and/or Environmental Impact Statements (EISs) to document environmental impacts of agency actions and alternatives to those actions. The public has legally mandated opportunities to comment on these impact statements.

Federal Government Reforms

The federal government reforms laws and regulations by enacting new legislation and proposing new rules to implement the legislation. Reforms can stem from government oversight organizations' recommendations, including from both DOI's Office of Inspector General (OIG) and the US Government Accountability Office (GAO). Below are lists of reforms following the Deep Water Horizon oil spill, recent findings from government oversight organizations, and proposed rules.

Regulatory Reforms Following the Deepwater Horizon Oil Spill

Reforms to federal regulations occurred in the aftermath of the Deep Water Horizon Oil Spill in the Gulf of Mexico in 2010.[71] The federal government overhauled the oversight of DOI's leasing, regulation, and collection of revenue for oil and gas extraction on the Outer Continental Shelf. DOI's post Deepwater Horizon reorganization separated and established independent oversight for offshore leasing (i.e., BOEM)[72], offshore safety and environmental enforcement (i.e., BSEE)[73], and the collection and accountability of the revenue generated from natural resource development on federal and Indian lands through the creation of the Office of Natural Resources Revenue (i.e., ONRR). When the Secretary of the Interior announced the creation of ONRR in May 2010 and the elimination of the former Minerals Management Service in June 2010, the goal was to fundamentally restructure the government's mineral leasing, regulatory, and revenue collection agencies. The Secretary wanted to:

- Separate the three responsibilities (leasing, regulation, and revenue collection)

[70] National Environmental Policy Act of 1969, http://www.gpo.gov/fdsys/pkg/USCODE-2010-title42/pdf/USCODE-2010-title42-chap55-sec4321.pdf

[71] National Commission on the BP Deep Water Horizon Oil Spill and Offshore Drilling, "Deep Water: The Gulf Oil Disaster and the Future of Offshore Drilling: Report to the President," January 2011, http://www.gpo.gov/fdsys/pkg/GPO-OILCOMMISSION/pdf/GPO-OILCOMMISSION.pdf

[72] BOEM, "Reforms Since the Deep Water Horizon Tragedy," n.d., http://www.boem.gov/Reforms-since-the-Deepwater-Horizon-Tragedy/

[73] Both BOEM and ONRR have issued regulations that apply to offshore lands in addition to BSEE.

- Provide each office and bureau with the independence and resources necessary to fulfill their missions
- Eliminate real and perceived conflicts associated with the previous organizations

While the federal government did make regulatory reforms following the spill, Congress did not change any laws related to offshore fossil fuel management in response to the accident.

Office of Inspector General Reports

DOI's OIG[74] is responsible for the independent oversight and promotion of excellence, integrity, and accountability within the programs, operations, and management of DOI. OIG also identifies and prevents fraud, waste, and mismanagement within the agency. In recent years, OIG has published numerous reports related to DOI revenue from natural resource extraction, including:

- October 2014, "BIA Needs Sweeping Changes to Manage the Osage Nation's Energy Resources."[75] This report states that the Bureau of Indian Affairs (BIA) Osage Agency has a flawed oil and gas management program, including the policies and procedures that guide royalty payment activities, accounting, and leasing activities. The report provides 33 recommendations to improve the program.
- March 2014, "Bureau of Land Management's Mineral Materials Program."[76] This audit report states that, among other challenges, the BLM Mineral Materials Program has little assurance that it obtains market value for mineral materials and provides 15 recommendations to enhance the program.
- September 2012, "Oil and Gas Leasing in Indian Country: An Opportunity for Economic Development."[77] This report concludes that Indian oil and gas leasing is not reaching its full economic potential, largely due to a lack of a dedicated and coordinated management focus at the federal level for the more than 17,000 leases on Indian lands.

In 2015, BIA issued a final rule regarding mineral extraction on the Osage mineral estate, which is available here. On August 10, 2015, a federal district court judge in Oklahoma enjoined the rule, pending hearings on a lawsuit.

(https://www.federalregister.gov/articles/2015/05/11/2015-11314/leasing-of-osage-reservation-lands-for-oil-and-gas-mining)

[74] Dodd-Frank Wall Street Reform and Consumer Protection Act, http://www.gpo.gov/fdsys/pkg/PLAW-111publ203/pdf/PLAW-111publ203.pdf

[75] OIG, "BIA Needs Sweeping Changes to Manage the Osage Nation's Energy Resources," October 2014, https://www.doioig.gov/sites/doioig.gov/files/CR-EV-BIA-0002-2013Public1.pdf

[76] OIG, "Bureau of Land Management's Mineral Materials Program," March 2014, https://www.doioig.gov/sites/doioig.gov/files/C-IN-BLM-0002-2012Public.pdf

[77] OIG, "Oil and Gas Leasing in Indian Country: An Opportunity for Economic Development," September 2012, https://www.doioig.gov/sites/doioig.gov/files/CR-EV-BIA-0001-2011Public.pdf

- May 2010, "Minerals Management Service: Royalty-In-Kind (RIK) Program's Oil Volume Verification Process."[78] OIG found several areas where the RIK Program could be improved to ensure proper accounting of royalties that are paid in oil and gas volumes to the US Government, rather than in dollars.

Government Accountability Office Reports

The GAO is an independent, nonpartisan agency that investigates how the federal government spends taxpayer funds, including those for natural resource management on federal and Indian lands. GAO publishes its reports on the GAO Summary Page.[79] Some recent GAO findings related to natural resource extraction include:

- December 2013, "Oil and Gas Resources: Actions Needed for Interior to Better Ensure a Fair Return."[80] This report examines steps DOI has taken to ensure that the public receives a fair return on oil and gas resources extracted from federal lands, as well as recommends improvements to the fiscal system.
- September 2008, "Oil and Gas Royalties: The Federal System for Collecting Oil and Gas Revenues Needs Comprehensive Reassessment."[81] This report evaluates the government take from federal oil and gas resources and assesses DOI's work in monitoring the performance and appropriateness of the current fiscal system.
- March 1989, "The Mining Law of 1872 Needs Revision."[82] This report critiques the foundational mining law on three major points: that the law's annual work requirements need to be replaced, that the law forces the federal government to sell valuable land at nominal prices, and that the patent provision runs counter to other natural resource policies.

To search the Federal Registrar for DOI proposed rules, please visit here.

(https://www.federalregister.gov/articles/search?conditions%5Bpublication_date%5D%5Bis%5D=11%2F04%2F2015&conditions%5Bterm%5D=Department+of+the+Interior&conditions%5Btype%5D%5B%5D=PRORULE)

[78] OIG, "Minerals Management Service: Royalty-in-Kind Program's Oil Volume Verification Process," May 2010, https://www.doioig.gov/sites/doioig.gov/files/2010-I-0021.pdf

[79] GAO, "Oil and Natural Gas," n.d., http://www.gao.gov/key_issues/oil_and_natural_gas/issue_summary

[80] GAO, "Oil and Gas Resources: Actions Needed for Interior to Better Ensure a Fair Return," December 2013, http://gao.gov/assets/660/659515.pdf

[81] GAO, "Oil and Gas Royalties: The Federal System for Collecting Oil and Gas Revenues Needs Comprehensive Reassessment," September 2008, http://www.gao.gov/new.items/d08691.pdf

[82] BLM, "Oil and Gas; Hydraulic Fracturing on Federal and Indian Lands," http://www.gpo.gov/fdsys/pkg/FR-2015-03-26/pdf/2015-06658.pdf

Proposed Rules

Per the Administrative Procedures Act, agencies propose rules to implement federal laws. The public has an opportunity to comment on all proposed rules before an agency finalizes any regulations. Recently, DOI bureaus and offices proposed new rules intended to go into effect in 2015, including:

- Proposed BLM rule on hydraulic fracturing available in the Federal Register publication of Oil and Gas; Hydraulic Fracturing on Federal and Indian Lands[83]
- Proposed BLM rule on wind and solar competitive leasing available in the Federal Register[84]
- Proposed ONRR rule on consolidated federal oil and gas and federal and Indian coal valuation reform available in the Federal Register[85]

THE 2010 DODD-FRANK ACT

In 2010, the United States enacted the Dodd-Frank Wall Street Reform and Consumer Protection Act (http://www.gpo.gov/fdsys/pkg/PLAW-111publ203/pdf/PLAW-111publ203.pdf) (124 Stat. 1376) to improve transparency and accountability across the financial system. Section 1504 of the act requires extractive industries companies registered with the Securities and Exchange Commission (SEC) to separately disclose information about payments to governments around the world in an interactive data format.

Section 1504 mandates disclosure of "the type and total amount of (such) payments made for each project of the resource extraction issuer relating to the commercial development of oil, natural gas, or minerals," including "taxes, royalties, fees (including license fees), production entitlements, bonuses, and other material benefits, that the Commission, consistent with the guidelines of the Extractive Industries Transparency Initiative (to the extent practicable), determines are part of the commonly recognized revenue stream for the commercial development of oil, natural gas, or minerals."

SEC is rewriting the rule to implement this law. SEC has stated that the revised rule will be proposed by the end of 2015. Section 5.2e of the EITI Standard states: "Reporting at project level is required, provided that it is consistent with the United States Securities and Exchange Commission rules and the forthcoming (now implemented) European Union requirements." According to SEC scheduling, it will issue final implementation rules by June 2016.

[83] BLM, "Oil and Gas; Hydraulic Fracturing on Federal and Indian Lands," March 26, 2015, http://www.gpo.gov/fdsys/pkg/FR-2015-03-26/pdf/2015-06658.pdf

[84] BLM, "Competitive Processes, Terms, and Conditions for Leasing Public Lands for Solar and Wind Energy Development and Technical Changes and Corrections," September 30, 2014, http://blmsolar.anl.gov/documents/docs/FR_Competitive_Leasing_Sep_30_2014.pdf

[85] ONRR, "Consolidated Federal Oil & Gas and Federal & Indian Coal Valuation Reform," January 5, 2015, http://www.gpo.gov/fdsys/pkg/FR-2015-01-06/pdf/2014-30033.pdf

What roles do federal government agencies play in natural resource fiscal management in the United States?

In the United States, Congress passes laws to govern the extraction of natural resources and the fiscal management of resulting revenue. Federal agencies, part of the executive branch, then develop regulations and rules to implement and enforce those laws. DOI has primary responsibility for implementing the relevant statutes and regulations. It does so in consultation with other federal agencies, including NOAA, EPA, the US Department of Energy (DOE), and others.

US Department of the Interior[86]

DOI protects and manages the nation's natural resources and cultural heritage; provides scientific and other information about those resources; and honors its trust responsibilities or special commitments to American Indians, Alaska Natives, and affiliated island communities.

Bureaus and offices within DOI fulfill this mission by serving three primary functions related to natural resource extraction: (1) managing federal and Indian lands and natural resources; (2) enforcing regulations and rules; and (3) collecting, managing, and disbursing revenue from natural resource extraction on federal and Indian lands.

[86] DOI, n.d., https://www.doi.gov/

The following DOI organizations play an important role in natural resource extraction for onshore federal lands:

The Bureau of Land Management's (BLM)[87] mission is to manage and conserve federal lands for the use and enjoyment of present and future generations under a mandate of multiple-use and sustained yield. BLM manages the exploration, development, and production of natural resources on federal lands, including lease sales and the permitting and licensing processes. BLM also ensures that developers and operators comply with requirements and regulations. BLM collects revenue in the form of bonuses, rents, and fees.

The Office of Surface Mining Reclamation and Enforcement's (OSMRE)[88] mission is to establish a nationwide program to protect society and the environment from the adverse effects of surface coal mining operations, under which OSMRE is charged with balancing the nation's need for continued domestic coal production with protection of the environment. OSMRE works with states and tribes to ensure that citizens and the environment are protected during coal mining and that the land is restored to beneficial use when mining is finished. OSMRE and its partners are also responsible for reclaiming and restoring lands and water degraded by mining operations before 1977. OSMRE collects revenue

[87] BLM, n.d., http://www.blm.gov/wo/st/en.html

[88] OSMRE, n.d., http://www.osmre.gov/about.shtm

in the form of reclamation fees from companies for the Abandoned Mine Reclamation Fund, a fund intended to pay for the cleanup of mines abandoned before 1977.[89] Interest earnings on the fund are used to pay for certain United Mine Workers of America health and retirement funds authorized by Congress.

The following DOI bureaus play a major role in natural resource extraction on the Outer Continental Shelf:

The Bureau of Ocean Energy Management's (BOEM)[90] mission is to promote energy independence, environmental protection, and economic development through responsible, science-based management of offshore conventional and renewable energy and marine mineral resources. BOEM manages the responsible exploration and development (including resource evaluation, planning, and leasing) of energy and mineral resources in federal submerged lands and updates leasing regulations for the Outer Continental Shelf.[91] In FY 2013, BOEM collected $2 million in revenue in the form of cost recovery fees.

The Bureau of Safety and Environmental Enforcement's (BSEE)[92] mission is to promote safety, protect the environment, and conserve resources offshore through vigorous regulatory oversight and enforcement. BSEE enforces safety and environmental regulations, as well as updates rules governing operations on the Outer Continental Shelf. In FY 2013, BSEE collected $70 million in revenue in the form of fees.

The following DOI office plays an important revenue management role in natural resource extraction for both onshore federal and Indian lands, as well as offshore on the Outer Continental Shelf:

The Office of Natural Resources Revenue's (ONRR)[93] mission is to collect, disburse, and verify federal and Indian energy and other natural resource revenue on behalf of all Americans. ONRR collects revenue from energy and mineral leases for both onshore and offshore federal and Indian lands, manages and disburses revenue to funds and recipients, and advocates for the interests of Indian mineral owners. In FY 2013, ONRR collected $14.4 billion in revenue in the form of bonuses, rents, and royalties.

[89] OSMRE, "Reclaiming Abandoned Mine Lands," n.d., http://www.osmre.gov/programs/aml.shtm

[90] BOEM, n.d., http://www.boem.gov/

[91] BOEM, "BOEM and the National Environmental Policy Act," n.d., http://www.boem.gov/National-Environmental-Policy-Act/

[92] BSEE, n.d., http://www.bsee.gov/

[93] ONRR, n.d., http://www.onrr.gov/

US Department of the Treasury ("Treasury")[94]

The Treasury's mission is to support economic growth and stability in the United States and overseas, as well as protect the US financial system and manage the federal government's finances and resources.

The following Treasury bureau plays an important revenue management role for natural resource extraction, as well as for all other industries in the United States:

Internal Revenue Service (IRS)[95]

The IRS' mission is to assist US taxpayers with understanding and meeting their tax obligations, and to enforce the law when taxpayers do not meet these obligations. The IRS collects corporate income taxes from C-corporations in the extractive industries, as well as income taxes from all other companies operating in these industries. In the 2013 tax year,[96] the IRS calculated $11.8 billion in corporate income tax receipts from Mining and Petroleum and Coal Products Manufacturing industries.[97]

[94] Treasury, n.d., http://www.treasury.gov/Pages/default.aspx

[95] IRS, n.d., http://www.irs.gov/

[96] As used in the IRS Statistics of Income, it applies to the time period when a return is submitted and sampled for calculation.

[97] IRS, "SOI Tax Stats—Table 7: Corporation Returns with Net Income," n.d., http://www.irs.gov/uac/SOI-Tax-Stats-Table-7-Corporation-Returns-With-Net-Income

4

HOW NATURAL RESOURCES RESULT IN FEDERAL REVENUE

How Natural Resources Result in Federal Revenue

How does the US Government award rights to extract natural resources from federal lands?

In the United States, citizens, corporations, and public bodies, such as municipalities, can apply to the federal government for rights to extract natural resources from federal lands. The 2015 USEITI Report focuses on companies, the largest revenue contributors. Unlike many other countries with significant extractive industries, the US Government does not own, wholly or in part, oil, gas, renewable energy, or mining companies.

In awarding rights to companies to extract natural resources from federal lands, the federal government balances competing policy goals and interests, and adheres to and enforces regulations. For the right to extract many natural resources from federal lands—which are owned by US citizens—companies pay the federal government revenue.

There are five main phases for how the United States awards rights to extract natural resources from federal lands, including how extracting those resources eventually results in revenue for the public. The image on the next page includes a description of these phases and DOI revenue collection.[98]

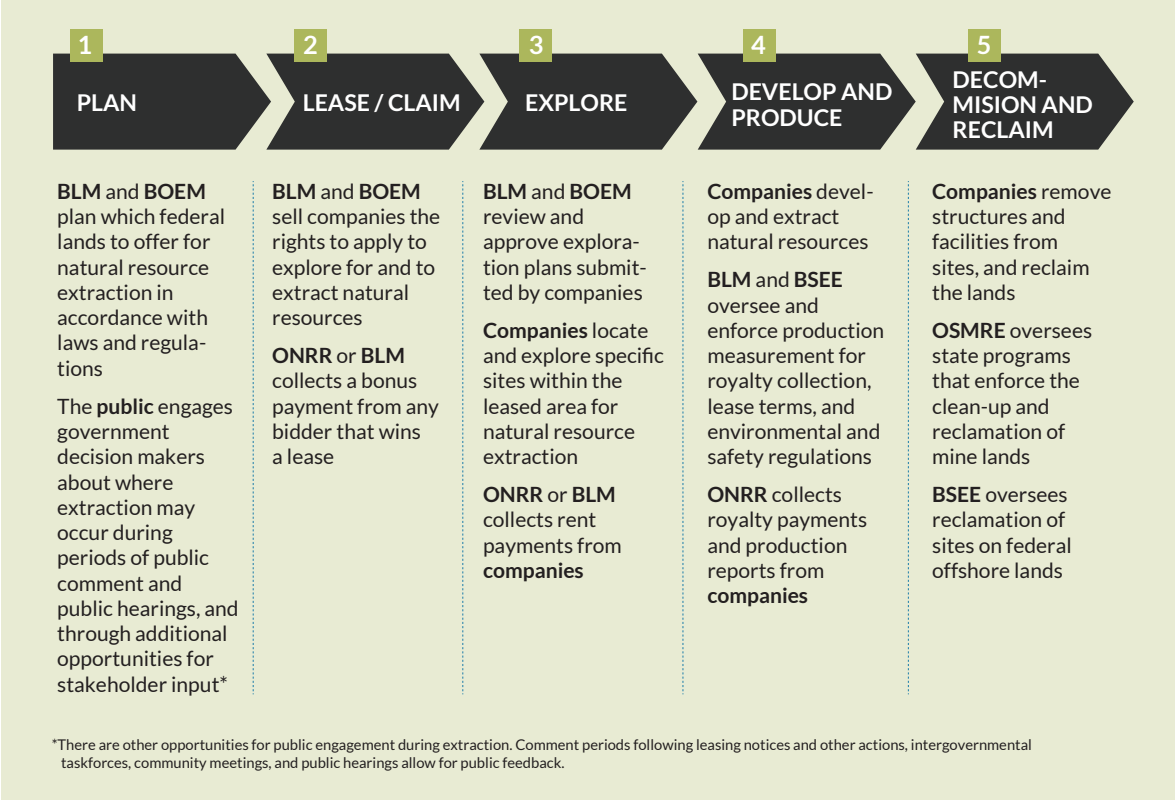
1. Plan

During the plan phase, BLM and BOEM make long-term plans to identify which federal lands to open for natural resource extraction. BLM and BOEM operate within the laws set by Congress, which specify land uses.

In making plans, BLM and BOEM balance the United States' energy and economic needs with environmental, community, and other considerations. BLM's multiple-use planning process for coal extraction and BOEM's Five-Year Outer Continental Shelf Oil and Gas Leasing Program are examples of how the federal government weighs different public interests in planning for how to use federal lands.

[98] BLM, "Oil and Gas: Hydraulic Fracturing Rule" n.d., http://www.blm.gov/wo/st/en/prog/energy/oil_and_gas.html; BLM, "What is BLM's authority for leasing oil and gas?" n.d., http://www.blm.gov/wo/st/en/prog/energy/oil_and_gas/questions_and_answers.html; and BLM, "Coal Operations" n.d., http://www.blm.gov/wo/st/en/prog/energy/coal_and_non-energy.html, http://www.boem.gov/Leasing/

Extraction Phases: How Natural Resources on Federal Lands Result in DOI Revenue



At this stage, the federal government must often prepare a programmatic EIS in line with the National Environmental Policy Act to estimate the impact of the natural resource extraction program on the environment, as well as alternatives to the proposed action. The public has many opportunities to engage with and comment on environmental and regulatory reviews during this process.

In addition to engaging with environmental and regulatory reviews, the public can participate in and inform how natural resources result in DOI revenue by engaging locally with BLM, BOEM, and intergovernmental natural resource task forces. For example, BOEM regularly holds community meetings and public hearings[99] with citizens in Alaska.

[99] BOEM, "Reaching Out to Alaska Communities," n.d., http://www.boem.gov/About-BOEM/BOEM-Regions/Alaska-Region/Community-Liaison/index.aspx

The process of how the federal government awards rights to extract natural resources from federal lands, and how those resources eventually result in revenue, differs depending on the resource in question and whether extraction is taking place onshore or offshore. To learn more about how different resources result in revenue, visit the online report: https://useiti.doi.gov/how-it-works/

A June 2013 report from DOI's OIG found that in 80% of coal lease sales in the Powder River Basin, only one company submitted a bid during 1994–2013. Since there was little competition for extracting coal during this time period, calculating fair market value was extremely important to ensuring the public received a fair price. BLM assesses fair market value based on the price of coal, current and future demand, shipping and transportation costs, the quality of the coal, and other factors. The OIG's report made 13 recommendations to improve the leasing process, including using the department's Office of Valuation Services to calculate fair market value, as well as adjusting the calculation to reflect growing demand from China for US coal. (https://www.doioig.gov/sites/doioig.gov/files/CR-EV-BLM-0001-2012Public.pdf)

Furthermore, before offering federal onshore lands for leasing, the Secretary of the Interior may provide 45 days of notice to the public, including a 30-day period to receive public comments after the announcement. The Secretary of the Interior may also provide opportunities for the public to participate in developing the resource management plans that ultimately determine which federal lands will be leased.[100] These opportunities can include public hearings and community meetings that inform and direct how potential extraction activities will affect community life. In the past, public engagement has helped determine the scope of extraction projects and has raised environmental issues and alternatives that were not fully addressed by federal government proposals.[101]

2. LEASE / CLAIM

During the lease / claim phase, the federal government, specifically BLM for onshore lands and BOEM for offshore lands, sells the rights to apply to explore for, develop, and extract natural resources on federal lands. This sale of rights is called a lease. However, in the case of mining hardrock minerals, applicants pay a set fee to stake a claim rather than bid on a lease. Leases and claims do not last forever; for example, a lease could last for 10 or 40 years, during which time the lease holder must demonstrate progress in extracting natural resources. When leases and claims expire, the rights return to the federal government.

The laws and statutes that govern natural resource extraction in the United States have created safeguards in the leasing process to protect the public's interest. For example, all oil and gas leases, both onshore and offshore, as well as almost all coal leases, go through a competitive

[100] Congressional Research Service, "Energy Projects on Federal Lands: Leasing and Authorization," p. 4-5, Adam Vann, February 1, 2012, http://fas.org/sgp/crs/misc/R40806.pdf

[101] 2012 Oil, Shale & Tar Sands Programmatic EIS, "Public Involvement," n.d., http://ostseis.anl.gov/involve/index.cfm

leasing process. A competitive leasing process is open to interested bidders, and multiple parties can bid on and compete for a single lease. The government awards the lease to the highest bidder, so long as that bidder meets its requirements (for example, the bidder for a federal coal lease cannot hold an existing federal coal lease for more than 10 years that has not produced commercial quantities of coal). Leasing for fossil fuels becomes noncompetitive when only one party bids on an oil and gas lease or when a parcel of land for coal leasing is surrounded by a company's existing mining operation.

As an additional safeguard to get the public a fair price, the federal government cannot accept any bid (even if there is only one bid) for an oil, gas, or coal lease if it does not meet or exceed the fair market value. The fair market value is the fair price that the federal government's analysis shows an applicant would bid given the geological resources in the land. The measure of the land's fair market value is based on the federal government's estimate of the price the land would sell for in a competitive market. For offshore lands, BOEM conducts the fair market value analysis after opening each sealed bid to make sure the apparent winner's bid is high enough. BOEM looks for evidence of market competition and estimates the tract value. For onshore lands, BLM estimates the fair market value prior to a lease sale. Different state offices use different approaches, including using recent comparable sales and estimating the future value of the natural resources in question. After BLM has determined the fair market value, the bureau conducts live auctions for leases.

In both the competitive and noncompetitive leasing processes, either BLM (for onshore resources) or ONRR (for offshore resources) collects the bid from the winning company, called a bonus payment, as well as the first year's rent for the lease.

A December 2013 report from GAO found that the BLM guidance allows for flexibility in how state offices estimate fair market value, and that offices vary in their approach for coal. Some offices only consider recent comparable sales, while others also estimate future revenue. Furthermore, the report found that some state offices were falling short on documenting and reviewing fair market value determinations. (http://www.gao.gov/assets/660/659801.pdf)

3. EXPLORE

During the explore phase, the lease holder must obtain licenses and permits from federal, state and local, and potentially tribal agencies to explore for natural resources. Exploration is the process of discovering the specific location, quantity, and quality of natural resources on claimed or leased lands. Exploration typically takes place after the lease is secured, but in some instances, exploration by multiple parties is permitted before the lease is sold in order to increase competition in the bidding process.[102] To

[102] BLM, "BLM Colorado Coal: Coal Exploration Licenses," n.d., http://www.blm.gov/co/st/en/BLM_Programs/minerals/Coal.html#Coal_Exploration_Licenses

apply for an exploration permit, companies must submit an exploration plan detailing all planned exploration activities, including timing, location, method, and potential environmental impact. For onshore lands, BLM evaluates exploration plans and issues exploration permits to companies. For offshore lands, BOEM evaluates exploration plans and BSEE issues exploration permits.

The exploration process varies between natural resources, but most exploration requires extensive geological expertise and technical capacity. Companies use many exploration techniques, including magnetic surveying, seismic mapping, sample analysis, and drilling exploratory wells. Exploration is more difficult and expensive offshore than onshore; as a result, the exploration phase for offshore natural resources usually takes longer than for onshore natural resources. For example, an onshore permit to drill for oil and gas expires after two years;[103] the exploration period for offshore oil and gas leases ranges from five to ten years depending on the depth of water and the presence of adverse conditions such as hazardous weather.[104] During the exploration period, companies pay annual rent set in the lease terms on the claimed or leased lands to the federal government, which is collected by ONRR or BLM.

4. DEVELOP AND PRODUCE

During the develop and produce phase, the lease holder, after locating resource deposits, must obtain licenses and permits from federal, state and local, and potentially tribal agencies to develop and extract natural resources. The federal government issues grants during the extraction process, including rights of way and rights of easement. These grants allow companies to build support structures for extraction operations on federal lands.

For oil, gas, and coal, once a company wins a lease and starts developing and extracting, ONRR collects revenue from the extraction process in royalties. To facilitate accurate royalty collections, companies are required to file production reports and royalty reports with ONRR.[105] In addition, BSEE requires oil and gas companies to use specific metering technology to accurately measure production.[106] BLM recently committed to updating its oil and gas regulations to increase the accuracy of measuring and reporting production quantities.[107] During this phase, BLM and BSEE also conduct both announced and unannounced in-person inspections of production operations to enforce lease terms.

[103] BLM, "Surface Operating Standards and Guidelines for Oil and Gas Exploration and Development (The Gold Book)," 2007, http://www.blm.gov/wo/st/en/prog/energy/oil_and_gas/best_management_practices/gold_book.html

[104] BOEM, "Resource Evaluation Glossary," n.d., http://www.boem.gov/Resource-Evaluation-Glossary/

[105] ONRR, "Reporting & Paying," July 20, 2015, http://onrr.gov/ReportPay/default.htm

[106] BSEE, "National Notice to Lessees and Operators of Federal Oil and Gas Leases, Outer Continental Shelf," July 15, 2012, http://www.bsee.gov/uploadedFiles/BSEE/Regulations_and_Guidance/Notices_to_Lessees/2012/NTL2012-N03.pdf

[107] GAO, "Management of Federal Oil and Gas Resources: What We Found: Royalty Determination and Collection," 2015, http://www.gao.gov/highrisk/management_federal_oil_gas/why_did_study#t=1

5. DECOMMISSION AND RECLAIM

During the decommission and reclaim phase, the lease holder must remove all facilities and structures following the terms of the lease, as well as take steps to return federal lands to an environmentally and economically sound state. The government often holds a bond, paid upfront by the company, as insurance that the lease holder will comply with all regulations and appropriately decommission the project and reclaim the site.

In the case of coal, OSMRE oversees state programs to enforce restoring mine lands following the end of a mining operation. BLM also oversees shut-in and abandoned oil and gas production sites so that they are reclaimed properly.

While most natural resources on federal lands where extraction generates revenue travel through these five phases, the details of the process differ by resource, as well as whether extraction happens onshore or offshore.

Where can the public learn more about specific leases to extract natural resources from federal lands?

Public information about who has applied for and received exploration and development rights, as well as under what terms, varies by natural resource and by the federal bureau responsible for managing it. For example, BOEM maintains a public database of PDF copies of offshore leases. BLM manages leasing through state and regional field offices; copies of leases for onshore resources are only available in BLM field offices.

The EITI requires that participating countries maintain a register of licenses for natural resource extraction that meets certain criteria. The following provides an overview of publicly available information regarding different types of licenses (leases, in particular), links to public information, and a checklist of EITI criteria that must be met:

Registers of Licenses in the United States

Natural Resource Rights	Source	Adherence to EITI Criteria for Standard 3.9 Register of Licenses
Leases for offshore natural resources, including oil and gas and other minerals, as well as renewable energy resources (information on plans, permits, and right of ways also available)	The public can view information related to leases (and sometimes the leases themselves), issued for resources on the Outer Continental Shelf by visiting BOEM's leasing information page[1] and BSEE's database[2]	✓ Lease holder ✓ Coordinates of lease area ✓ Date of application ✓ Date of award ✓ Duration ✓ Commodity produced
Register of leases and rights of way for onshore natural resources, including oil and gas, coal, solar energy, wind energy, and geothermal energy (information on permits, contracts, grants, and agreements also available); information on unpatented mining claims included	The public can see whether a lease was issued for oil and gas, if lands were nominated for a geothermal sale, the total applicants for a wind energy development project, or the number of solar right-of-way actions processed or granted by visiting BLM's Land & Mineral Legacy Rehost 2000 System (LR2000) database[3]	✓ Lease/right of way/project holder or applicant ✓ Coordinates of lease area (state only for oil and gas, township for geothermal) ✓ Date of application (for some commodities) ✓ Date of award ✓ Duration (for some commodities) ✓ Commodity produced

[1] BOEM, "Leasing Information," n.d., https://www.data.boem.gov/homepg/data_center/leasing/leasing.asp

[2] BSEE, "Public Information Query for Active-Inactive-Leases," n.d., https://www.data.bsee.gov/homepg/data_center/other/WebStore/pimaster.asp?appid=11

[3] BLM, "BLM's Land & Mineral Legacy Rehost 2000 System (LR2000)," n.d., http://www.blm.gov/lr2000/

In the case of offshore natural resources, the public can also learn the process for leasing in individual sales, the technical and financial criteria used, and the bidders involved. BOEM's regional leasing pages for Alaska[108], the Gulf of Mexico[109], and the Pacific[110] contain this information, as well as BOEM's lease and grant information page.[111]

What revenue do companies pay for extracting natural resources?

DOI Revenue from Extracting Natural Resources on Federal Lands

When companies extract natural resources on federal onshore lands and the Outer Continental Shelf, they pay revenue to DOI. In general, for extracting fossil fuels and renewable resources, companies pay bonuses, rents, royalties, or fees and penalties (if incurred) to ONRR, and in some cases bonuses and rents to BLM. Royalties, a percentage of the sales value of extracted resources, make up most of the revenue paid to DOI. Lease holders also pay different fees to BLM, BSEE, and BOEM, often to reimburse the federal government for costs associated with awarding, administering, and enforcing leases. For extracting locatable hardrock minerals on federal lands, companies pay fees, but not royalties under the Mining Law of 1872. For an overview of revenue streams and statutory and regulatory rates by natural resource, please see the chart on the next page.

To learn more about the national revenue classification system in the United States, visit here (http://www.irs.gov/irm/part4/irm_04-001-005.html)

To learn more about the International Monetary Fund's international revenue standards, visit here (http://www.imf.org/external/np/sta/gfsm/) and to learn more about the Code of Good Practices on Fiscal Transparency, visit here (https://www.imf.org/external/np/fad/trans/code.htm)

Federal Corporate Income Taxes

Corporations operating in the extractive industries also pay taxes to the IRS on their income. These companies pay federal corporate income taxes regardless of whether they extract natural resources from federal, state, or privately held lands, inside or outside of the United States, so long as they have a liability. These companies also pay taxes on

[108] BOEM, "Alaska Region Leasing," n.d., http://www.boem.gov/Alaska-Region-Leasing/

[109] BOEM, "Gulf of Mexico Region Leasing Information," n.d., http://www.boem.gov/Gulf-of-Mexico-Region-Leasing-Information/

[110] BOEM, "Pacific OCS Region Lease Management," n.d., http://www.boem.gov/Pacific-Lease-Management/

[111] BOEM, "Lease and Grant Information," n.d., http://www.boem.gov/Lease-and-Grant-Information/

Select Federal Revenue Streams and Statutory and Regulatory Rates

Natural Resource			DOI Revenue Streams and Rates[1] During Extraction on Federal Lands and Waters			Additional Federal Revenue
Category	Resource	Location	Securing a Lease or Claim	Pre-Production	During Production	Income Taxes
Fossil Fuels	Oil and Gas	Onshore	Bonus: amount paid for the lease by the highest bidder	$1.50 annual rent per acre for the first 5 years $2.00 annual rent per acre thereafter	12.5% of production value in royalties	Income Tax: C-corporations pay income taxes to the IRS. Depending on company income, federal corporate income tax rates can range from 15–35%. Public policy provisions, such as tax expenditures can decrease corporate income tax and other revenue payments in order to promote other policy goals.
		Offshore	Bonus: amount paid for the lease by the highest bidder	$7.00 or $11.00 annual rent per acre increasing over time up to $44.00 per acre in some cases	12.5%, 16.7%, or 18.75% of production value in royalties	
	Coal	Surface	Bonus[2]: amount paid for the lease by the highest bidder	$3.00 annual rent per acre	12.5% of production value in royalties $0.28[3] per ton Abandoned Mine Land Fee	
		Subsurface	Bonus[2]: amount paid for the lease by the highest bidder	$3.00 annual rent per acre	8% of production in royalties $0.12[3] per ton in Abandoned Mine Land Fee	
Nonenergy Minerals	Hardrock Minerals	Public Domain Lands	$20 Processing Fee $37 Location fee $155 Initial Maintenance Fee	$155 Annual Maintenance Fee per claim	No royalties are required to be paid[4]	
		Acquired Lands	$6,500 Prospecting Permit Fee	$0.50 Annual Prospecting Fee per acre $1.00 annual rent per acre	Royalty rates are exempt from minimums and determined on an individual case basis by the authorized leasing officers	
Renewable Energy	Solar and Wind Energy[8]	Onshore (solar and wind)	Bonus: amount paid for the lease by the highest bidder (inside designated leasing areas) $15 per acre Application Filling Fee (outside designated leasing areas)	Rent determined by acreage and land value	$6.21[6] Megawatt Capacity Fee per KW from wind $3.55–$5.32[7] Megawatt Capacity Fee per KW from solar	
		Offshore (wind)	Bonus: amount paid for the lease by the highest bidder (competitive lease) $0.25 per acre for Acquisition Fee (uncompetitive lease)	$3.00 annual rent per acre	2%, unless otherwise specified or waived, of anticipated value of wind energy produced in Operating Fee	

[1] Though some of these rates are determined by statute or in regulations developed by the DOI, companies may pay lower effective rates due to tax expenditures or discretionary adjustments by DOI bureaus.
[2] For coal, companies pay one fifth of the bonus amount immediately when granted a lease. Companies pay each of the remaining fifths in each of the following four years.
[3] If the gross value per ton of the coal removed is less than 10 times the rate of the fee, the Abandoned Mine Lands Fee operates at an ad valorem rate of 10% of the gross value of the coal mined per ton.
[4] Mining locatable hardrock minerals falls under The General Mining Act of 1872 which does not require royalty payments.
[5] Mining hardrock minerals on acquired lands is exempt from minimum production and minimum royalty requirements under Title 43 in the Code of Federal Regulations.
[6] For wind energy, proposed fee of $6,209 per MW.
[7] For solar energy, proposed fee ranging from $3,548–$5,322 per MW.
[8] All values are for BLM's proposed rule available in the federal registrar here: http://www.blm.gov/style/medialib/blm/wo/MINERALS__REALTY__AND_RESOURCE_PROTECTION_/energy/solar_and_wind.Par.4208.File.dat/Solar%20and%20Wind%20Competitive%20Leasing%20Proposed%20Rule.pdf

income stemming from extracting natural resources and processing them into other products and commodities. There are different types of companies operating in these industries, with different ownership structures, and as a result, they are treated as different taxpayers. Specifically, there are:

- C-corporations with many shareholders who own the company; these companies pays corporate income taxes to the IRS
- S-corporations with 100 shareholders or less who own the company; shareholders pay personal income taxes to the IRS
- Partnerships[112] where two or more members own the business; members individually pay income taxes to the IRS
- Sole proprietorships with one individual owner; the individual owner pays personal income tax to the IRS

Only income taxes from C-corporations are included in the 2015 USEITI Report.

Revenue Policy Provisions

While royalty rates can reach as high as 18.75%, and the federal corporate income tax rate can reach as high as 35% depending on company income, companies may pay less than these rates. Revenue policy provisions, including royalty relief and tax expenditures, can result in smaller revenue and tax payments to the federal government in order to promote other policy goals.

Royalty Relief

In order to incentivize companies to produce additional oil and gas on certain leases on the Outer Continental Shelf where extraction is anticipated to be unprofitable, the federal government may grant some lease holders royalty relief. Royalty relief means that these lease holders do not have to pay royalties on some amount of production, or they pay a smaller percentage of royalties, for the oil and gas they extract. There are four situations in which a lease holder may gain royalty relief either within the lease terms or through an application process:

- Leases in deep waters with depths greater than 200 meters in the Gulf of Mexico[113]
- Leases in shallow waters with depths under 400 meters for deep gas production
- Leases towards the end of their lives in which halving royalties would encourage additional production
- Special cases in which continued production under existing terms is projected to be unprofitable

In some situations, if oil and gas prices rise above certain thresholds, lease holders that previously gained royalty relief must start paying royalties at the regular rate once again.

[112] Partnerships can include C-corporations, tax-exempt entities, and trusts.

[113] This type of relief has not been offered in several years, though existing leases do include this type of relief currently.

Tax Expenditures

"Tax expenditures are defined in the law as 'revenue losses attributable to provisions of the federal tax laws which allow a special exclusion, exemption, or deduction from gross income or which provide a special credit, a preferential rate of tax, or a deferral of tax liability.' These exceptions may be viewed as alternatives to other policy instruments, such as spending or regulatory programs."[114]

The Treasury estimates the total dollar amount of each tax expenditure in a given year, and publishes a report[115] of these estimates.[116]

The Treasury provides estimates for five expenditures related to extracting fossil fuels. For FY 2013, expensing of exploration and development costs for fuels was the largest expenditure out of these five, totaling $550 million.[117]

The Treasury provides estimates for four tax expenditures targeted at developing renewable energy. For FY 2013, the energy investment credit was the largest out of those four, totaling $2 billion. The energy production credit was the second largest, totaling $1.7 billion.[118]

The Treasury provides estimates for two tax expenditures related to extracting nonenergy minerals. For FY 2013, the excess of percentage-over-cost depletion for nonenergy minerals was the largest out of those two, totaling $580 million.[119]

The budget of the US Government also includes annual estimates of the net revenue effects of eliminating a wider range of fossil fuel related tax expenditures outlined in the Treasury's report, "United States—Progress Report on Fossil Fuel Subsidies."[120] When added together, eliminating fossil fuel tax expenditures would decrease the US deficit by $4.4 billion a year on average over a 10-year budget window, per estimates in the White House report titled, "Fiscal Year 2016

INSTEAD OF RECEIVING THE ENERGY PRODUCTION OR ENERGY INVESTMENT CREDITS, COMPANIES CAN CLAIM A PAYMENT, SO LONG AS THEY PLACED THEIR RENEWABLE ENERGY FACILITIES IN SERVICE FROM 2009 TO 2011, OR IF CONSTRUCTION FOR THESE FACILITIES BEGAN DURING THIS PERIOD AND THE PROPERTIES WERE PUT IN SERVICE BY A SET DEADLINE. ACCORDING TO THE TREASURY, THE EFFECT OF THESE PAYMENTS ON FEDERAL BUDGET OUTLAYS IN FY 2013 WAS $8 BILLION.

[114] Treasury, "Tax Expenditures," n.d., http://www.treasury.gov/resource-center/tax-policy/Documents/Tax-Expenditures-FY2017-Revised.pdf

[115] Treasury, "Tax Expenditures," n.d., http://www.treasury.gov/resource-center/tax-policy/Pages/Tax-Expenditures.aspx

[116] Tax expenditure estimates do not necessarily equal the increase in federal revenue (or the change in the budget balance) that would result from repealing these special provisions.

[117] Treasury, "Tax Expenditures," Table 14-1, "Estimates of Total Income Expenditures for Fiscal Years 2013–2019," n.d., http://www.treasury.gov/resource-center/tax-policy/Documents/Tax-Expenditures-FY2015.pdf

[118] Treasury, "Tax Expenditures," Table 14-1 "Estimates of Total Income Expenditures for Fiscal Years 2013–2019," n.d., http://www.treasury.gov/resource-center/tax-policy/Documents/Tax-Expenditures-FY2015.pdf

[119] Ibid.

[120] Treasury, "United States Progress Report on Fossil Fuel Subsidies," n.d., http://www.treasury.gov/open/Documents/USA%20FFSR%20progress%20report%20to%20G20%202014%20Final.pdf

Mid-Session Review, Budget of the US Government."[121] The report did not include estimates of the effects of eliminating renewable and nonenergy mineral tax expenditures.

Visit the online report to learn more about tax expenditures relevant to the extractive industries, including the definitions of different expenditures and FY 2013 total dollar estimates.

[121] The White House, "Fiscal Year 2016 Mid-Session Review: Budget of the US Government," Table S-8, "Mandatory and Receipt Proposals," p. 56, July 14, 2015, https://www.whitehouse.gov/sites/default/files/omb/budget/fy2016/assets/16msr.pdf

Where does federal revenue go?

Once collected, the federal government distributes revenue from natural resource extraction for public use in a variety of ways. Federal corporate income taxes go to the General Fund of the Treasury (the "General Fund"), and Congress determines how to allocate these resources each year through the appropriations process.

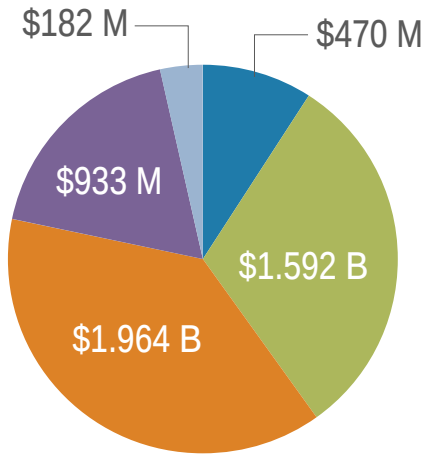
In comparison, DOI revenue from extraction on federal lands goes to many different funds and entities. In FY 2013, ONRR disbursed $14.224 billion in DOI revenue. The recipient of these funds depends on whether the revenue is derived from onshore or offshore natural resource extraction.

DOI Onshore Revenue Distribution

In FY 2013, ONRR disbursed $5.141 billion in revenue from natural resource extraction on federal and Indian lands. ONRR disbursed this revenue across recipient entities as follows:

FY 2013 ONRR Disbursements from Onshore Natural Resource Extraction on Federal and Indian Lands[1]

Treasury	Funds disbursed to the Treasury go to the General Fund, which is the federal government's basic operating fund. The General Fund pays for roughly two-thirds of all federal expenditures, including the US military, national parks, and schools.	$470 million (9% of federal onshore disbursements)
The Reclamation Fund	Established by Congress in 1902 to pay for Bureau of Reclamation projects, this fund supports the establishment of critical infrastructure projects like dams and power plants.	$1.592 billion (31% of federal onshore disbursements)
States	Funds disbursed to states fall under the jurisdiction of each state, and each state determines how the funds will be used.	$1.964 billion (38% of federal onshore disbursements)
Indian Tribes	ONRR disburses 100% of revenue collected from resource extraction on American Indian lands back to the Indian tribes and individual Indian land-owners.	$933 million (18% of federal onshore disbursements)
Other	Certain onshore funds are directed back to the federal agencies that administer these lands (e.g., BLM, US Fish and Wildlife Service, and US Forest Service) to help cover the agencies' operational costs. The Ultra-Deepwater Research Program and the Mescal Settlement Agreement also receive $50 million each.	$182 million (4% of federal onshore disbursements)

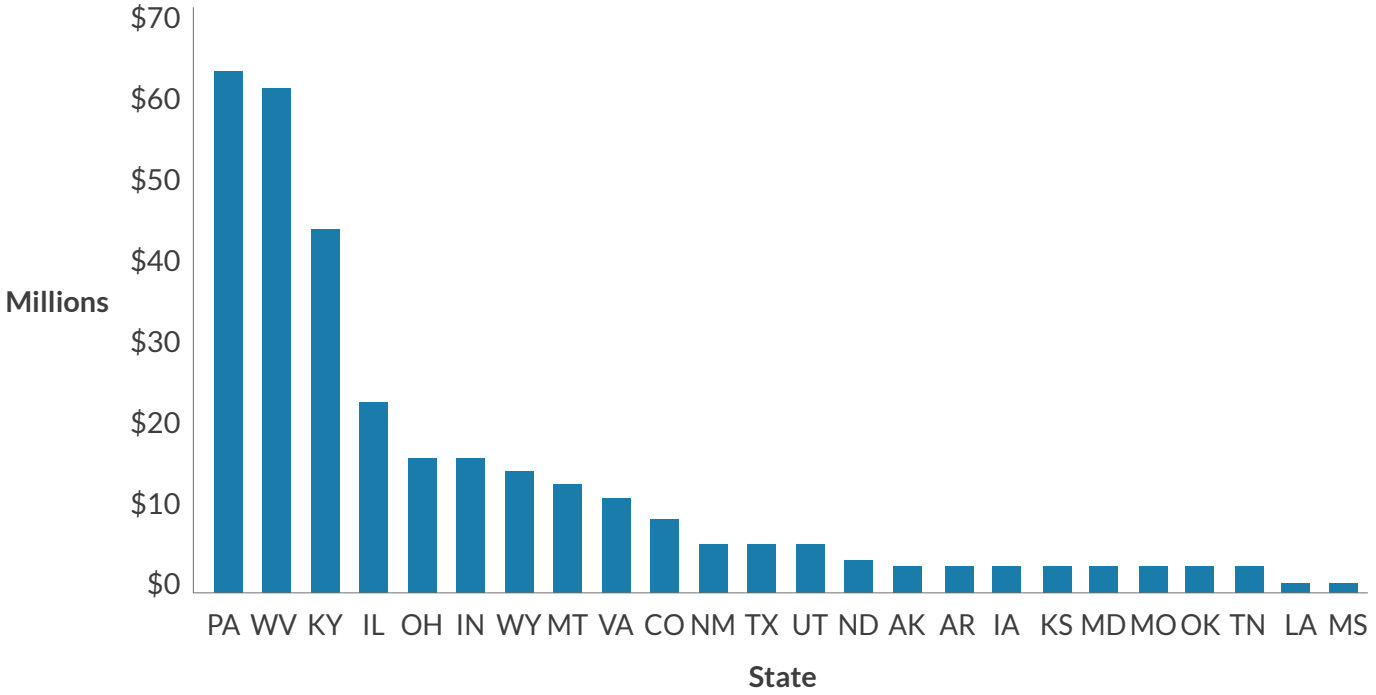


[1] ONRR, "Statistical Information," search criteria: disbursements, summary, FY 2013, n.d., http://statistics.onrr.gov/ReportTool.aspx

In addition to the funds ONRR disbursed, OSMRE disbursed over $322 million from the Abandoned Mine Reclamation Fund in FY 2013 to 24 states and three tribes. States and tribes use these funds to reclaim mine lands abandoned from mining operations prior to 1977.

IN ADDITION TO THESE STATES, THE CROW TRIBE RECEIVED $1.7 MILLION, THE HOPI TRIBE $1.3 MILLION, AND THE NAVAJO TRIBE $6.8 MILLION.

FY 2013 AML Fees Mandatory Distribution to States[1]



[1] OSMRE, "FY2013 AML Grant Distribution," n.d., http://www.osmre.gov/resources/grants/docs/FY13GrantDist.pdf

DOI Offshore Revenue Distribution

In FY 2013, ONRR disbursed $9.083 billion in revenue from natural resource extraction on the Outer Continental Shelf. ONRR disbursed this revenue across recipient entities as follows:

FY 2013 ONRR Disbursements from Offshore Natural Resource Extraction on the Outer Continental Shelf[1]

Treasury

$7.781 billion (**86%** of federal offshore disbursements)

The majority of offshore revenue is disbursed to the Treasury, which enters it into the General Fund, the federal government's basic operating fund. The General Fund pays for roughly two-thirds of all federal expenditures, including the US military, national parks, and schools.

The Land and Water Conservation Fund

$896 million (**10%** of federal offshore disbursements)

This fund provides matching grants to states and local governments to buy and develop public outdoor recreation areas across the 50 states.

States

$41 million (**<1%** of federal offshore disbursements)

States receive federal Outer Continental Shelf revenue in two ways: (1) 27% of revenue from leases in the 8(g) Zone (the first three nautical miles of the Outer Continental Shelf) are shared with states; and (2) 37.5% of revenue from certain leases in the Gulf of Mexico are shared with Alabama, Louisiana, Mississippi, and Texas.

Historic Preservation Fund

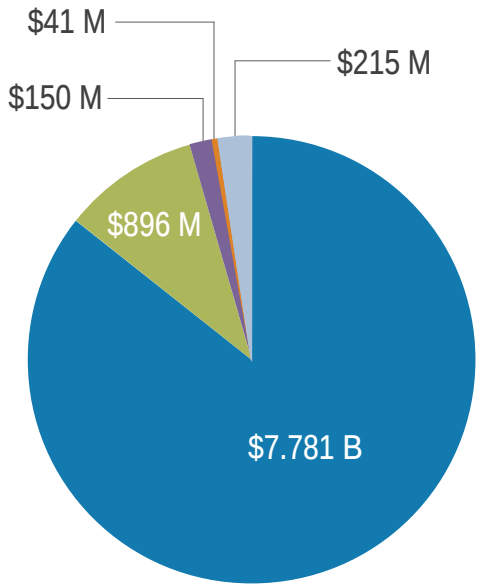
$150 million (**2%** of federal offshore disbursements)

This fund helps preserve US historical and archaeological sites and cultural heritage through grants to state and tribal historic preservation offices.

Other

$215 million (**2%** of federal offshore disbursements)

Certain offshore funds are directed back to the federal agencies that administer these lands (e.g., BOEM and BSEE) to help cover the agencies' operational costs.

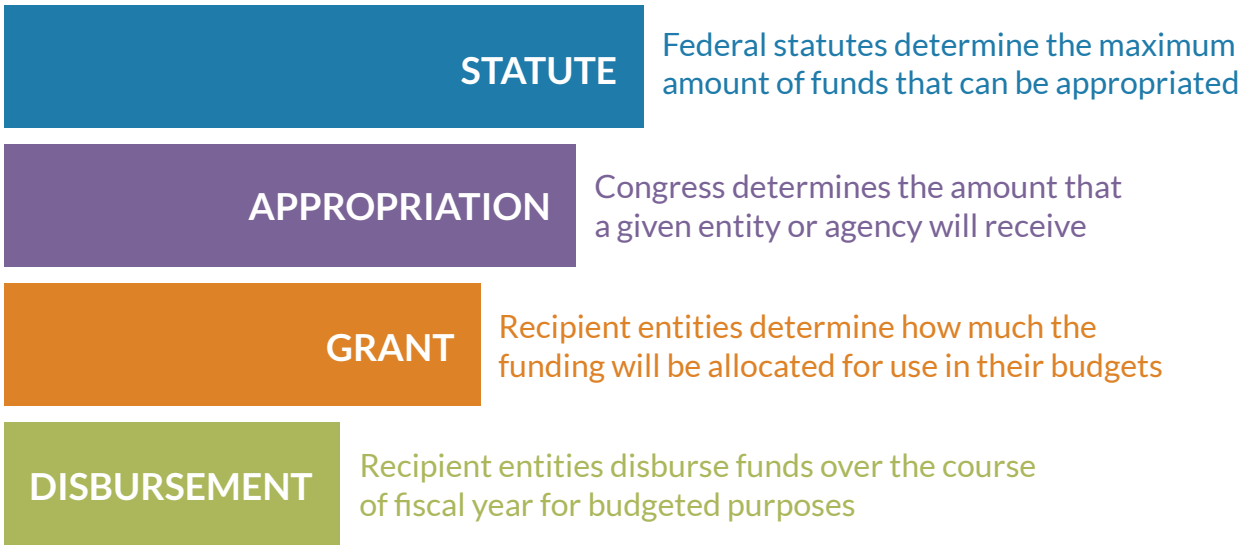


[1] ONRR, "Statistical Information," search criteria: disbursements, summary, FY 2013, n.d., http://statistics.onrr.gov/ReportTool.aspx

Federal Budget Process

Once extractive industries' revenue is collected by the federal government, it passes through a series of budgetary "gateways" before ultimately funding public services and community development. These gateways are described below:

Visit the online report to view an interactive visualization of where DOI revenue goes.



5

STATE NATURAL RESOURCE EXTRACTION GOVERNANCE

State Natural Resource Extraction Governance

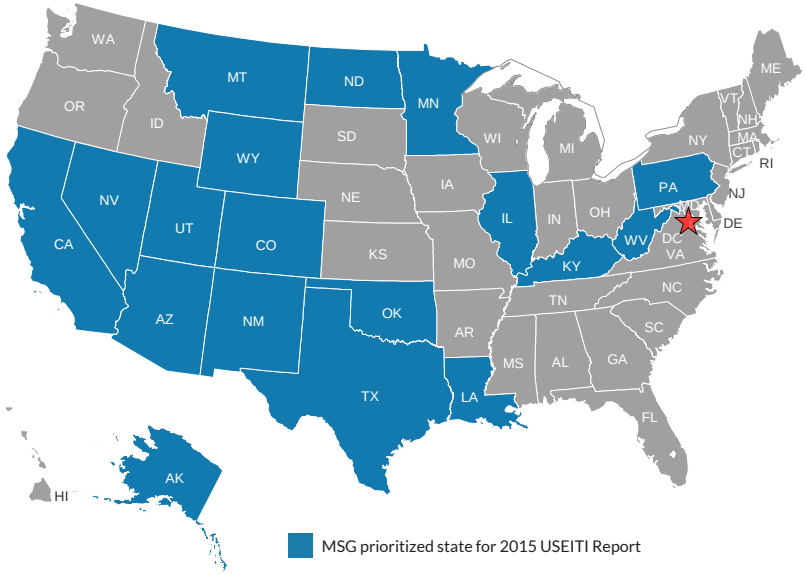
How is natural resource extraction governed in US states?

Under the US federal structure, states maintain ownership of some lands and natural resources; develop their own taxation and royalty systems applicable to oil, gas, nonenergy minerals, and renewable energy; and collect extractive revenue directly. Each state has a unique revenue system.

While all 50 states have some natural resource extraction activity, the MSG chose to focus the 2015 USEITI Report on 18 states that, in 2013, led the country in oil, gas, coal, and nonenergy mineral production; had the most DOI revenue and / or state production taxes; and / or had the most significant tribal natural resource interests. These 18 states are highlighted in blue on the map to the right.

In accordance with adapted implementation, the USEITI has organized online state government data sources that detail each of these 18 states' laws and statutes, revenue collected and dispersed, state government agencies, and state production data relevant to natural resource extraction.

Map of 18 MSG Prioritized States for the 2015 USEITI Report[1]



[1] USEITI, State and Tribal Opt-in Subcommittee, "Criteria for Choosing Opt-In States," June 10–11, 2014, https://www.doi.gov/sites/doi.gov/files/migrated/eiti/FACA/upload/State-Opt-In-Presentation.pdf

Role of State Government Agencies

State government agencies create regulations and rules related to natural resource extraction based on applicable state laws and statutes (federal laws and regulations apply to all states and localities). Specifically, state government agencies (1) manage state-owned land and natural resources, including leasing natural resources for extraction; (2) enforce regulations and rules related to natural resource extraction; and (3) collect, manage, and disburse revenue from natural resource extraction.

Each state has unique agencies that fulfill these functions. For example:

- *Manage state-owned land and natural resources*: In Louisiana, the Louisiana Department of Natural Resources oversees natural resource extraction on state-owned lands. In Arizona, the Arizona State Land Department fulfills this function. Both agencies administer natural resource leasing programs that transfer rights to natural resources on state-owned lands to companies for extraction.
- *Enforce regulations and rules:* States with surface mining operations have agencies devoted to mitigating the environmental impact of such activities and restoring surface mine lands after mining operations are complete: for example, the West Virginia Department of Environmental Protection's Division of Mining and Reclamation. DOI's OSMRE oversees this office, as well as others like it in other states.
- *Collect, manage, and disburse revenue*: In many states, the state department of revenue collects, manages, and disburses revenue collected from natural resource extraction on state and private lands within the state, as well as transfer payments from the federal government for natural resource extraction on federal lands located within the state. For example, the Montana Department of Revenue collects and distributes revenue, including revenue related to extractive industries, for the State of Montana.

Local government agencies also play a role in natural resource extraction in their jurisdictions. In particular, county departments of revenue collect, manage, and disburse local revenue from extractive industries activities.

State Leasing Programs

State ownership of land constitutes almost 9% of total land area in the United States.[122] Each state has its own process for leasing natural resources on state-owned lands, as well as different oversight procedures for when companies explore for, develop, and produce natural resources and when companies decommission projects and reclaim sites. For example, in the State of Alaska, the director of the Division of Oil and Gas at the Department of Natural Resources must establish in writing that the state's interests will be optimized before any leasing action can occur. Known as a "best-interest finding," the director weighs the

[122] Natural Resources Council of Maine, "Public Land Ownership by State," p. 2, n.d., http://www.nrcm.org/documents/publiclandownership.pdf

costs and benefits of the leasing action, including potential effects on natural, historical, and cultural resources, as well as on local communities and fish and wildlife populations. The director also considers public comments.

State Extractive Industries Revenue

The revenue a state receives from extractive activities varies by the local legal and fiscal framework, as well as by the types of resources and land owners involved. At a high level, many states receive the following revenue:

- Bonuses, rents, and royalties for natural resources produced from state-owned lands
- Severance taxes, sometimes called gross production taxes or royalties, on the amount or value of natural resources produced in a state whether on federal, state, or privately owned lands
- Transfer payments[123] from the federal government for natural resource production on federal lands within a state's borders or off its coast

For example, the state of Wyoming applies the following severance taxes on the value of extracted resources before processing and transportation:

Wyoming Severance Tax Rates[1]

Natural Resource	Severance Tax Rate
Natural gas	6%
Oil	6%
Surface coal	7%
Subsurface coal	3.75%
Gold	2%
Shale	2%

[1] State of Wyoming Department of Revenue, "Severance Tax Rates: January 1, 2015 through December 31, 2015," n.d., http://revenue.wyo.gov/mineral-tax-division/severance-tax-filing-information

State royalty rates vary. For example, Louisiana royalty rates average 21.9%, and can reach as high as 61.6%.[124] California has a minimum royalty rate of 16 and 2/3 % that can rise up to a maximum percentage outlined in the invitation to bid for a lease, and paid on the average production of oil per well, per day under the lease.[125]

State Revenue Disbursements

Each individual state determines how to disburse revenue from extractive industries' activities. To illustrate, North Dakota, one of the leading oil and gas producing states in the country, levies an Oil and Gas Production Tax at close to 1 cent per Mcf of gas, and at 5% of the gross production value

[123] ONRR, "State earns more than $2 billion in Federal Mineral Receipts," November 19, 2013, http://www.onrr.gov/about/pdfdocs/20131119.pdf

[124] Purpera, Daryl, State Mineral and Energy Board, "Mineral Lease Royalty Rates," n.d., April, 2013, http://app1.lla.state.la.us/PublicReports.nsf/DB918AD8E33411F286257B490074B82A/$FILE/00031C97.pdf

[125] California Public Resource Code, Section 6826–6836, http://www.leginfo.ca.gov/cgi-bin/displaycode?section=prc&group=06001-07000&file=6826-6836

of oil.[126] Twenty percent of the money collected from this tax is distributed to various state funds, while 80% flows to counties, cities, schools, and townships.

Moreover, North Dakota also sets an Oil Extraction Tax at 6.5%[127] of the gross production value of oil, which is distributed as follows:

- 20% to the Common Schools Trust Fund and Foundation Aid Stabilization Fund to support public institutions of learning and offset foundation aid reductions, respectively
- 20% to the Sinking Fund and Resources Trust Fund, which allocates resources for energy conservation programs
- 30% to the Legacy Fund, which provides a perpetual source of state revenue from finite oil and natural gas resources
- 30% to the General Fund, which is the primary cash account for the state to cover administrative and operating expenses[128]

In comparison, Alaska, another leading oil and gas producer, levies its own Oil and Gas Production Tax at 35% of the net value. Most of the revenue derived from the Oil and Gas Production Tax is deposited in the state's General Fund for government operations and basic services. Payments resulting from an assessment or litigation are deposited into the Constitutional Budget Reserve Fund, which covers the state's short-term deficits.[129]

Many states choose to establish permanent mineral trust funds through legislation. These funds allow states to invest and hold revenue from natural resource extraction over time. Permanent mineral trust funds can help governments dependent on revenue from natural resources smooth revenue and investments across boom and bust cycles.

[126] North Dakota Tax Department, "Oil and Gas Tax Frequently Asked Questions," n.d., http://www.nd.gov/tax/misc/faq/oilgas/

[127] Ibid.

[128] National Conference of State Legislatures, "State Revenues and the Natural Gas Boom: An Assessment of State Oil and Gas Production Taxes," June 2013, Cassandra Brown, http://www.ncsl.org/research/energy/state-revenues-and-the-natural-gas-boom.aspx

[129] Alaska Department of Revenue, Tax Division, "2014 Annual Report," p. 10, n.d., http://www.tax.alaska.gov/programs/documentviewer/viewer.aspx?1139r

Select States with Permanent Natural Resource Trust Funds[1]

State	Natural Resource(s)	Fund	Revenue Design	Revenue Uses
AL	Oil and gas	Alabama Trust Fund	Ninety-nine percent of all oil and gas capital payments paid to the state	General Fund, Forever Wild Land Trust Fund
AK	Primarily oil	Alaska Permanent Fund	Twenty-five percent of mineral-related (oil) income and legislative appropriations	Citizen dividends, inflation proofing, and General Fund
MT	Coal	Coal Severance Tax Trust Fund	Twenty-five percent of mineral-related (oil) income and legislative appropriations	Citizen dividends, inflation proofing, and General Fund
NM	Oil, gas, and coal	Severance Tax Permanent Fund	Fifty percent of coal severance tax collections	General Fund, education, infrastructure, reclamation, and economic development
ND	Oil	Legacy Fund	Thirty percent of oil production tax revenue	General Fund
UT	Coal, oil, and gas	State Endowment Fund	Severance tax revenue in excess of $71 million from oil and gas tax; revenue in excess of $27.6 million from coal mining	Economic diversification, capital, and infrastructure
WY	Coal, oil, and gas	Wyoming Permanent Mineral Trust Fund	A 1.5%–2.5% severance tax on natural gas, oil, and coal (30%–40% of mineral revenue)	General Fund

[1]Alabama State Treasury, "About the Alabama Trust Fund," n.d., http://www.treasury.state.al.us/content/About%20the%20ATF.html; and Alaska Permanent Fund Corporation, n.d., http://www.apfc.org/home/Content/home/index.cfm; Montana's Coal Severance Tax Distribution Detail, September 2014, http://leg.mt.gov/content/Publications/fiscal/leg_reference/Brochures/2014-Coal-Severance.pdf; New Mexico State Investment Council, "Severance Tax Permanent Fund," n.d., http://www.sic.state.nm.us/severance-tax-permanent-fund.aspx; North Dakota, n.d., http://www.nd.gov/treasurer/north-dakota-government-funds/; "State of Utah Financial Highlights," n.d., http://finance.utah.gov/reporting/documents/11FinalFinancialHighlightsNovemberIssue.pdf; and "Wyoming State Treasury Annual Report: For the Period July 1, 2012 through June 30, 2013," n.d., https://treasurer.state.wy.us/pdf/annualweb2013.pdf. Civil Society Organizations, such as Policy Matters Ohio and the West Virginia Center on Budget and Policy have compiled similar information for the public available at http://www.policymattersohio.org/wp-content/uploads/2014/01/SeveranceAppendix_Jan2014.pdf and http://www.wvpolicy.org/wp-content/uploads/2012/06/WVEconomicDiversificationTrustFundRpt021312.pdf, respectively.

Impact of Extractive Industries on State Economies

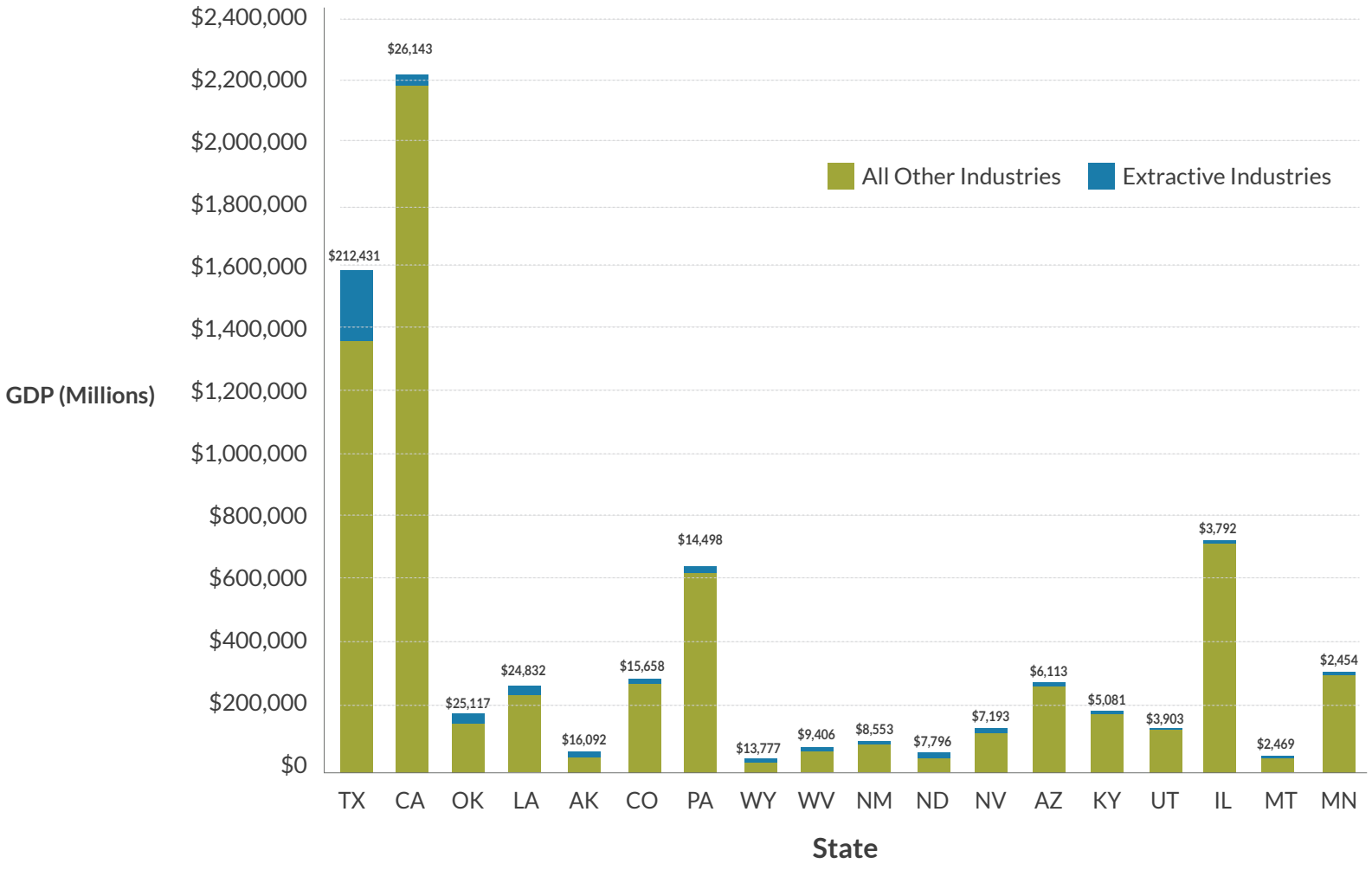
The following graphs and charts highlight the impact of extractive industries on the 18 prioritized states' economies. In particular, they highlight each state's value-added gross domestic product (GDP) from extractive industries, revenue from severance taxes and production on federal lands, and wage and salary employment in extractive industries.

Visit the online report to learn more about the impact of extractive industries on state economies, including value-added GDP.

GROSS DOMESTIC PRODUCT (GDP) measures the total value of goods and services produced in a specific geography. GDP shows the size of a local economy.

The Bureau of Economic Analysis (BEA) measures GDP by adding up the "real value added" for each industry that contributes to the US economy. According to the BEA, real value added includes "compensation of employees, taxes on production and imports, less subsidies, and gross operating surplus."

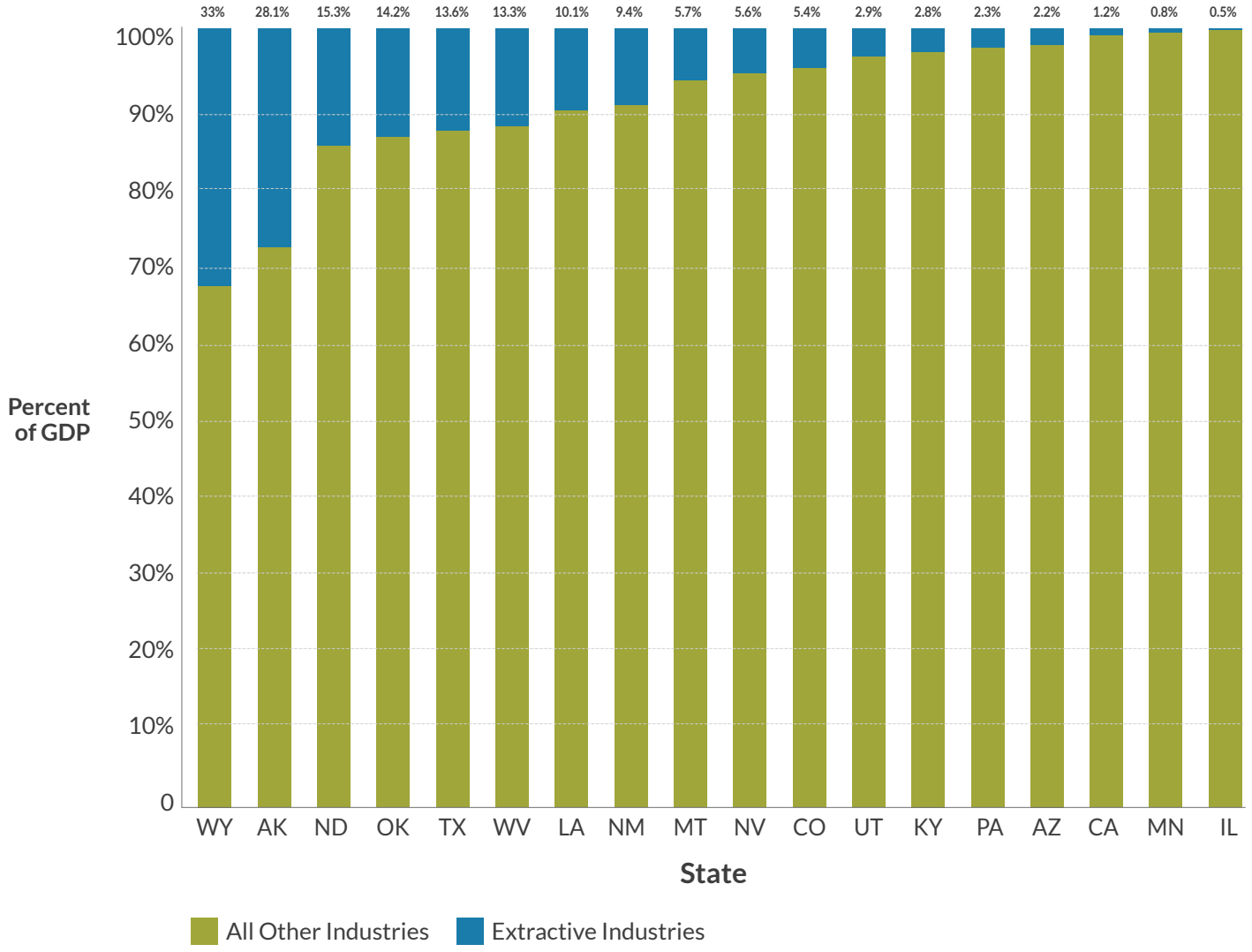
2013 State GDP from Extractive Industries Versus All Other Industries[1,2]



[1] Extractive Industries includes NAICS 21, oil, gas, and mining.

[2] BEA, "Regional Data: GDP & Personal Income," November 2015, https://www.bea.gov/iTable/index_regional.cfm

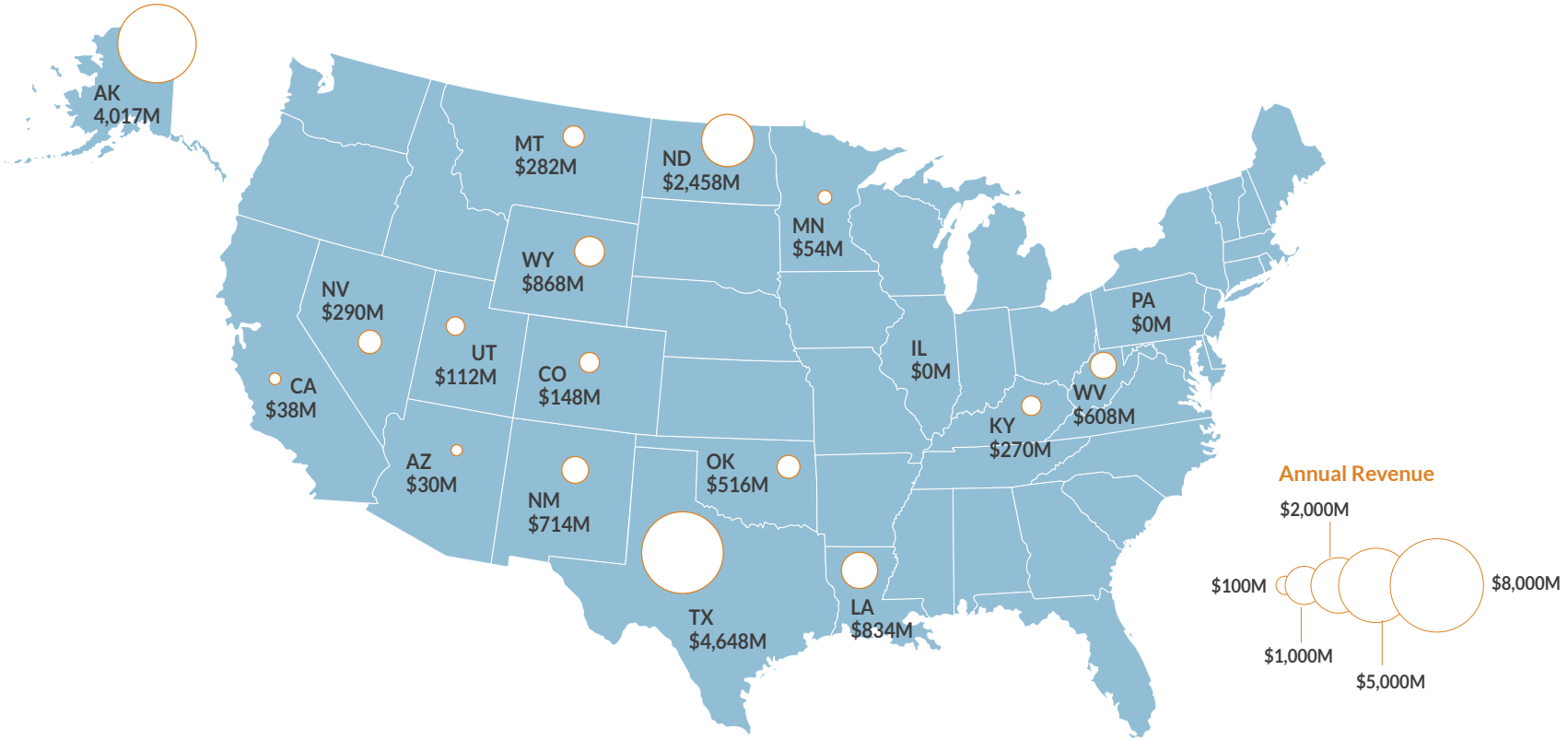
2013 Percent of State GDP from Extractinve Industries Versus All Other Industries[1,2]



[1] Extractive Industries includes NAICS 21, oil, gas, and mining.

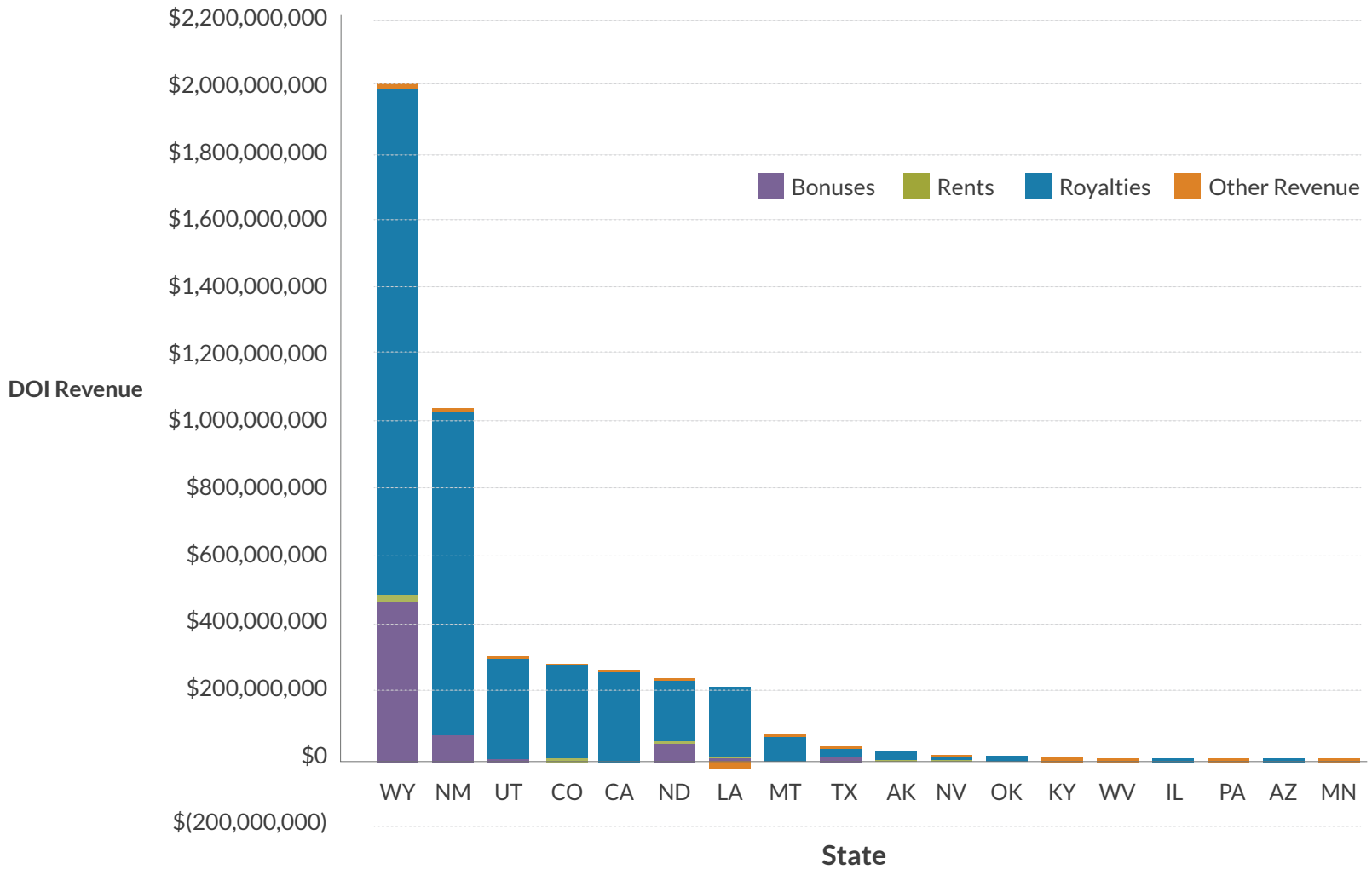
[2] BEA, "Regional Data: GDP & Personal Income," November 2015, https://www.bea.gov/iTable/index_regional.cfm

2013 Total Severance Taxes Collected in 18 MSG Prioritized States[1]



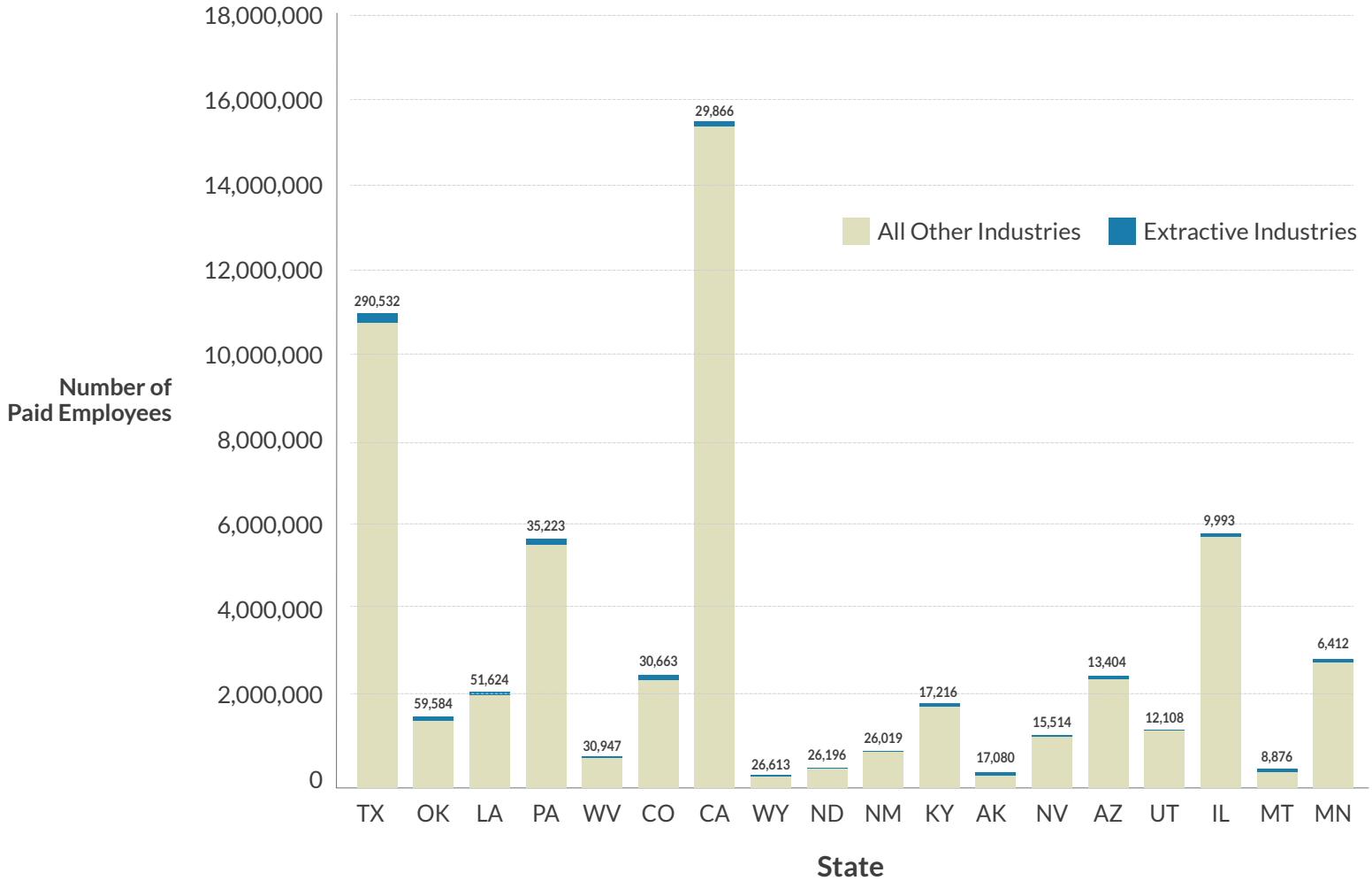
[1] US Census Bureau, "State Government Tax Collections Summary Report: 2013," Shelia O Sullivan and Russell Pustejovsky, Edwin Pome, Angela Wongus, and Jesse Willhide, April 8, 2014, http://www2.census.gov/govs/statetax/2013stcreport.pdf. The survey defines severance taxes as "taxes imposed distinctively on the removal of natural products (e.g., oil, gas, other minerals, forests, fish, etc.) from land or water." Pennsylvania and Illinois are among the states that do not collect severance taxes.

2013 Select DOI Revenue from Extraction on Federal Lands in 18 MSG Prioritized States[1]



[1] ONRR, "Statistical Information," n.d., http://statistics.onrr.gov/Default.aspx

2013 Wage and Salary Employment in Extractive Industries Versus All Other Industries in 18 MSG Prioritized States[1,2,3]

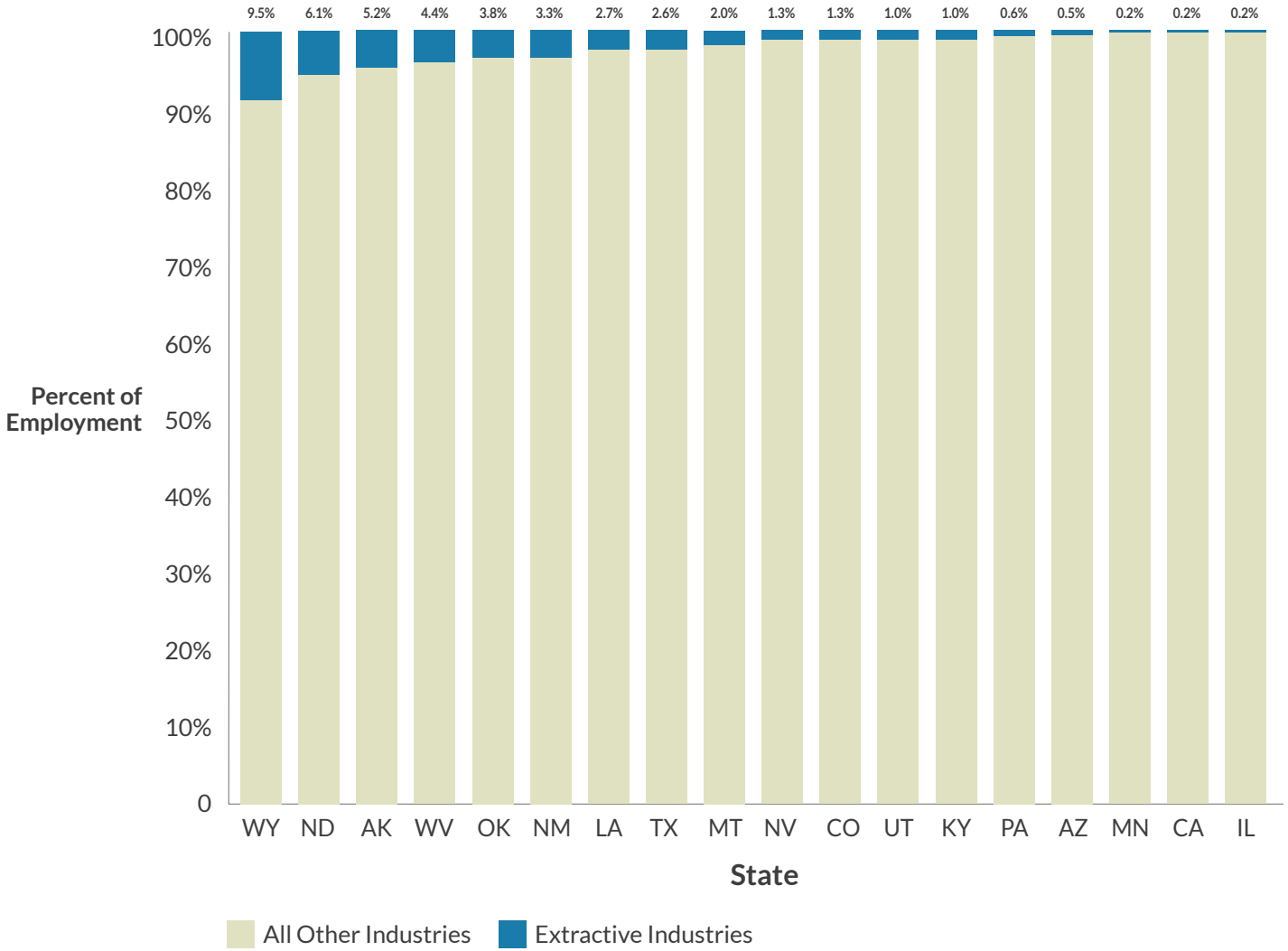


[1] Bureau of Labor Statistics, "Quarterly Census of Employment and Wages," "November 2015, http://www.bls.gov/cew/apps/data_views/data_views.htm#tab=Tables

[2] Wage and salary employment graphs do not include self employed, sole proprietors, and partnerships.

[3] Extractive industries includes NAICS 21 (oil, gas, and mining) and 221114–221116 (solar, wind, and geothermal energy).

2013 Wage and Salary Employment from Extractive Industries Versus All Other Industries[1,2,3]



[1] Wage and salary employment graphs do not include self employed, sole proprietors, and partnerships.

[2] Extractive industries includes NAICS 21 (oil, gas, and mining) and 221114–221116 (solar, wind, and geothermal energy).

[3] Bureau of Labor Statistics, "Quarterly Census of Employment and Wages," November 2015, http://www.bls.gov/cew/apps/data_views/data_views.htm#tab=Tables

6

TRIBAL NATURAL RESOURCE EXTRACTION GOVERNANCE

Tribal Natural Resource Extraction Governance

How is natural resource extraction governed on Indian lands?

According to the 2011 American Community Survey conducted by the US Census, there were 5.1 million American Indians and Alaska Natives living in the United States, accounting for approximately 1.6% of the population.[130] The federal government formally recognizes 567 Indian tribes and 325 Indian reservations that cover 56 million acres of land.[131] This land is held in trust by DOI and has significant natural resource extraction potential, containing up to 30% of US coal reserves west of the Mississippi, 50% of potential uranium reserves, and 20% of known oil and gas reserves.[132] Extracting natural resources on Indian land and distributing the associated revenue involves a unique set of processes and stakeholders.

The basis of the regulatory relationship between Indian tribes and the federal government was established in the Commerce Clause of the US Constitution (Article 1, Section 8, Clause 3). This relationship, as it pertains to land use and ownership, was clarified in the 1830s. In a series of Supreme Court decisions known as the Marshall Trilogy, former Supreme Court Justice John Marshall established several important principles of Indian law. One was the federal Indian trust responsibility, whereby the government charged itself with "moral obligations of the highest responsibility and trust" toward Indian tribes.[133] In this capacity, the US Government maintains fiduciary responsibility to protect tribal assets and resources and serves as a trustee for Indian lands.[134] Another was the principle that tribes are sovereign, which is inherent to them as the original governing bodies of what is now the United States, and that sovereignty can only be diminished by Congress.[135]

[130] US Census Bureau, "American Indian and Alaska Native Heritage Month: November 2012," October 25, 2012, https://www.census.gov/newsroom/releases/archives/facts_for_features_special_editions/cb12-ff22.html

[131] BLM, "Public Land Statistics 2013," Table 1-3, p. 7, July 2014, http://www.blm.gov/public_land_statistics/pls13/pls2013.pdf

[132] Revenue Watch Institute, "Native American Lands and Natural Resource Development," Maura Grogan, Rebecca Morse, and April Youpee-Roll, p. 3, 2011, http://www.resource-governance.org/sites/default/files/RWI_Native_American_Lands_2011.pdf

[133] BIA, "Frequently Asked Questions," n.d., http://www.bia.gov/FAQs/index.htm

[134] Ibid.

[135] Johnson versus McIntosh, 21 US 543, (1823)

Today, there are two major types of Indian-owned land:[136]

- Trust land, in which the federal government holds legal title, but the beneficial interest remains with individual or tribe. Trust lands held on behalf of individuals are known as allotments
- Fee land purchased by tribes, in which the tribe acquires legal title under specific statutory authority

These lands yield natural resources through a process governed primarily by the tribes themselves and four agencies within DOI. When a tribe initiates the leasing process, BIA or the tribe itself negotiates the lease sale, sets royalty rates and rental amounts, and issues the lease. If the tribe negotiates the lease, the BIA will approve the final negotiated deal. For an allotment owned by an individual, the BIA holds a bidding process to ensure the best return for the allottee. Once a contract is signed, BLM inspects the lease and helps prepare production and mining plans.

ONRR collects royalties from extractive companies and reviews monthly revenue and production reports to ensure accuracy. ONRR also performs lease audits to ensure royalties are correctly paid.

The Office of the Special Trustee for American Indians (OST) receives the payments and information from ONRR and disburses 100% of the funds to the owner of the land, whether that is an individual or a tribe.[137]

Natural resources are increasingly a key source of income for many Indian tribes. In FY 2013, ONRR and OST disbursed $933 million to Indian tribes and allottees, an increase of more than 171% from 10 years prior.[138] The table on the following page breaks out specific production and revenue totals for key resources in FY 2013.

The federal government may only release information about natural resource extraction and revenue in aggregate across all Indian lands. This is because of confidentiality and proprietary constraints on tribal data. These constraints arise from treaties, laws, and regulations that the government consistently and uniformly applies.

[136] Tribal Energy and Environmental Information Clearinghouse, "Tribal and Indian Land," n.d., http://teeic.indianaffairs.gov/triballand/

[137] ONRR, "Frequently Asked Questions from Indian Mineral Owners," p. 5, http://www.onrr.gov/IndianServices/pdfdocs/FrequentlyAskedQuestion.pdf

[138] ONRR, "Statistical Information," search criteria: disbursements, summary, FY 2013, n.d., http://statistics.onrr.gov/ReportTool.aspx

FY 2013 Indian Land Natural Resource Production and Reported Revenue (Sales Year Data)[1]

Resource	Production	Royalties	Rents	Bonuses
Coal (ton)	19,145,716	$78,225,311	$106,325	$12,561,353
Oil (bbl)	46,421,857	$729,744,651		-
Natural gas (Mcf)	240,552,694	$126,043,575	$4,231,254	-
Natural gas liquids (gal)	154,923,429	$15,317,988		-
Copper (ton)	3,967	$1,034,988	$6,174	-

[1] ONRR, "Statistical Information," search criteria: reported revenue (single year only), sales year, FY 2013, American Indian, n.d., http://statistics.onrr.gov/ReportTool.aspx

7

EXTRACTIVE INDUSTRIES IMPACTS

Extractive Industries Impacts

GDP measures the total value of goods and services produced in a specific geography. The Bureau of Economic Analysis (BEA) measures GDP by adding up the "real value added" for each industry that contributes to the US economy. According to the BEA, real value added includes "compensation of employees; taxes on production and imports, less subsidies; and gross operating surplus."

What roles do the extractive industries play in the US national economy?

In 2013, the US GDP was $16.7 trillion, making the US economy the largest in the world. Overall the extractive industries account for 2.6% of the US economy, outpacing utilities, agriculture, and education services in contribution to national GDP. The extractive industries in the United States totaled $441 billion in real value added in 2013.[139]

2013 Extractive Industries' Real Value-Added GDP in Billions of US Dollars and as a Percentage of Real US GDP[1]

Industry	Real Value Added[2] (in billions)	Value Added as a Percentage of Total US GDP
All Industries	$16,663.2	100%
Extractive Industries	$441.0	2.6%
Oil and Gas Extraction	$298.1	1.8%
Mining, Except Oil and Gas	$79.1	0.5%
Support Activities for Mining	$63.9	0.4%

[1] BEA, "Industry Data," November 5, 2015, http://www.bea.gov/iTable/iTable.cfm?ReqID=51&step=1#reqid=51&step=51&isuri=1&5114=a&5102=1

[2] BEA, An explanation of value added can be found here: http://www.bea.gov/faq/index.cfm?faq_id=1034

Extractive industries affect the US economy in a number of ways, including the quantity and value of the natural resources produced, the revenue collected for public purposes, the jobs held by people working in extractive industries, and the

[139] BEA, "Industry Data," November 5, 2015, http://www.bea.gov/iTable/iTable.cfm?ReqID=51&step=1#reqid=51&step=51&isuri=1&5114=a&5102=1

extractive exports that draw in money from abroad. While it can be difficult to quantify an industry's impact on a country, these measures—production, revenue, employment, and exports—start to highlight the extractive industries' role in the US economy.

Production on All Lands

Production totals for select natural resources covered in the 2015 USEITI Report and their estimated financial values are listed in the table below:

INDUSTRY DEFINITIONS:

In this section of the report, "extractive industries" refers to the North American Industry Classification System (NAICS) code 21, "Mining," which includes oil, gas, coal, and nonenergy minerals. NAICS breaks down Mining into three sub-industries: Oil and Gas Extraction; Mining, Except Oil and Gas; and Support Activities for Mining.

"Mining, Except Oil and Gas" includes coal, gold, copper, and iron, as well as other minerals.

"Support Activities for Mining" include, according to NAICS, "Establishments performing exploration (except geophysical surveying and mapping) for minerals, on a contract or fee basis... Exploration includes traditional prospecting methods, such as taking core samples and making geological observations at prospective sites."

2013 US Production and Value for Select Natural Resources

Resource	Production	Value
Oil	2,720,782 thousand barrels[1]	~$295 billion[2]
Gas (marketed production)	25,690,878 million cubic feet[3]	~$98.2 billion[4]
Coal	984,842 thousand short tons[5]	~$36.7 billion[6]
Copper	1,250 thousand metric tons[7]	~$9 billion[8]
Gold	230 metric tons[9]	~$10.2 billion[10]
Iron ore	53 million metric tons[11]	~$5 billion[12]
Renewables	534,286 GW hours[13]	Not available[14]

[1] EIA, "Crude Oil Production," http://www.eia.gov/dnav/pet/pet_crd_crpdn_adc_mbbl_a.htm

[2] Oil production value was determined by multiplying 2013 annual production by $108.56, which is the average Europe Brent price per barrel for that same year.

[3] EIA, "Natural Gas Marketed Production," http://www.eia.gov/dnav/ng/ng_prod_sum_dcu_NUS_a.htm

[4] Natural gas production value was determined by converting 2013 annual production from cubic feet to Btu (multiply by 1,025), and by multiplying by the 2013 Henry Hub natural gas spot price per million Btu ($3.73).

[5] EIA, "Table 1. US Coal Production, 2009 – 2015," http://www.eia.gov/coal/production/quarterly/pdf/t1p01p1.pdf

[6] Coal production value was determined by multiplying 2013 annual production by $37.24, which is the average mine sales price per short ton for the United States in 2013 according to the EIA.

[7] USGS, "Annual Commodity Summaries: Copper," 2015, http://minerals.usgs.gov/minerals/pubs/commodity/copper/mcs-2015-coppe.pdf

[8] USGS, "Annual Commodity Summaries: Copper," 2014, http://minerals.usgs.gov/minerals/pubs/commodity/copper/mcs-2014-coppe.pdf

[9] USGS, "Annual Commodity Summaries: Gold," 2015, http://minerals.usgs.gov/minerals/pubs/commodity/gold/mcs-2015-gold.pdf

[10] USGS, "Annual Commodity Summaries: Gold," 2014, http://minerals.usgs.gov/minerals/pubs/commodity/gold/mcs-2014-gold.pdf

[11] USGS, "Annual Commodity Summaries: Iron Ore," 2015, http://minerals.usgs.gov/minerals/pubs/commodity/iron_ore/mcs-2015-feore.pdf

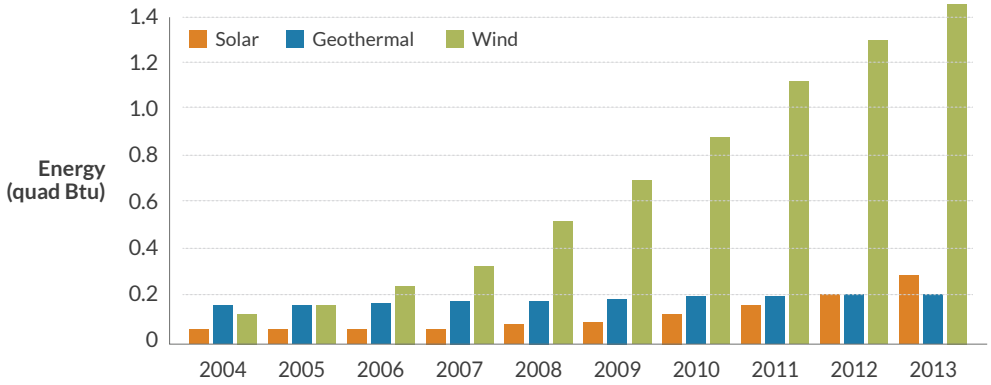
[12] USGS, "Annual Commodity Summaries: Iron Ore," 2014, http://minerals.usgs.gov/minerals/pubs/commodity/iron_ore/mcs-2014-feore.pdf

[13] DOE, "2013 Renewable Energy Data Book," p. 28, n.d., http://www.nrel.gov/docs/fy15osti/62580.pdf

[14] It is difficult to estimate the value of renewable energy produced in 2013 because it requires estimating the value of a GW hour which is a capacity measure, from several different sources.

In 2013, total US energy production from oil, gas, mining, and renewables reached 74 quadrillion British thermal units (Btus).[140] Over the past decade, the United States has invested heavily in clean energy initiatives, and renewable energy production has increased substantially. In 2013, wind power produced the largest amount of renewable energy (1.6 quadrillion Btu) compared with solar (0.3 quadrillion Btu) and geothermal (0.2 quadrillion Btu) sources.[141]

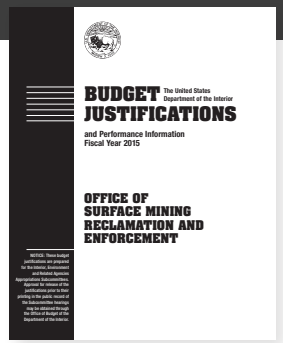
Solar, Geothermal, and Wind Production, 2004–2013[1]



[1] DOE, "2013 Renewable Energy Databook," p. 28, n.d., http://www.nrel.gov/docs/fy15osti/62580.pdf

In FY 2013, OSMRE collected $213.7 million in AML Fees from coal production. Learn more here.

(http://www.osmre.gov/resources/budget/docs/FY2015_Justification.pdf)



DOI Revenue from Extraction on Federal Lands

DOI Revenue from extractive industries' activities on federal lands totaled approximately $13.4 billion[142] in FY 2013, or 0.4% of total $3,396.9 billion in US revenue collected across the federal government.[143] Given that private companies and citizens, as well as state, local, and tribal governments, own a significant proportion of natural resources in the United States, this figure represents a fraction of the total revenue from natural resource extraction in 2013. This number also does not include corporate income taxes.

[140] EIA, "Table 1.1 Primary Energy Overview," n.d., http://www.eia.gov/totalenergy/data/monthly/pdf/sec1_3.pdf

[141] EIA, "Short-term Energy Outlook: Renewables and CO_2 Emissions," n.d., http://www.eia.gov/forecasts/steo/report/renew_co2.cfm

[142] ONRR, Statistical Information, Reported Revenues, FY 2013, Accounting Year, all federal lands onshore and offshore, http://statistics.onrr.gov/ReportTool.aspx

[143] US Office of Management and Budget, Table 1.1, "Summary of Receipts, Outlays, and Surpluses or Deficits: 1789 to 2020," n.d., http://www.whitehouse.gov/omb/budget/Historicals

FY 2013 Select DOI Revenue from Extraction for Select Natural Resources on Federal Lands (Accounting Year)[1]

Resource	Royalties	Rents	Bonuses	Other DOI Revenue
Oil	$6,893,982,830	$1,876	-	-
Gas	$1,508,090,863	-	-	-
Natural gas liquids	$448,137,690	-	-	-
Oil and gas	-	$298,715,850	2,864,635,992	$54,856,316
Coal	$697,439,021	$1,133,149	$460,458,002	$6,036,353
Copper	$1,406,249	-$2,611[2]	-	$26,110
Gold	$363	-	-	-
Geothermal	$12,099,530	$2,612,042	$113,052	$11,152
Wind	-	$411,728	$24,108	-
Total	**$9,561,156,546**	**$302,872,034**	**$3,325,231,154**	**$60,929,931**

[1] ONRR, "Statistical Information," search criteria: reported revenue (single year only), accounting year, FY 2013, federal (onshore and offshore), all states and offshore regions, http://statistics.onrr.gov/ReportTool.aspx

[2] Revenue can appear negative if ONRR is correcting a previous overpayment in the preceding time period.

In terms on anticipating the sustainability of revenue from the extraction of natural resources on federal lands, DOI has begun annual reporting on the present value of proved reserves for oil, gas, and coal by region.

Access DOI's interactive federal oil, gas, and coal royalty map here. (https://www.doi.gov/pfm/afr/2014/maps/royaltymap)

Read DOI's "Citizens Report: Summary of Performance & Finances for FY 2014" here. (https://www.doi.gov/sites/doi.gov/files/migrated/pfm/upload/FY-2014-DOI-Citizens-Report.pdf)

Corporate Income Taxes from Extractive Industries

Due to US law, information about companies' individual income tax payments is confidential. However, in the United States, there are two key sources of publicly available information about federal income taxes for the extractive industries: the government and the filings of companies that are publicly listed.

SOI produces a sample-based annual collection of aggregate statistics from corporate income tax returns as reported by corporations filing on Form 1120 (including 1120S, 1120-L, 1120-PC, 1120-REIT, 1120-RIC, and more) and associated schedules. The tax receipt statistics compiled by SOI are based on stratified probability samples and do not reflect any changes made by the taxpayer through an amended return or by the IRS as a result of an audit. This data is a sample-based estimate that is not disaggregated by individual companies. Additional information on the SOI's sampling methodology, including its limitations, is located under the Statistical Methodology section of the IRS Tax Statistics website. (http://www.irs.gov/uac/SOI-Tax-Stats-Statistical-Methodology)

Publicly Available Federal Corporate Income Tax Information from Government Sources

As mandated by the Revenue Act of 1916[144], the IRS publishes statistics related to "the operations of the internal revenue laws" as they affect individuals, corporations, and various other entities. The IRS Statistics of Income (SOI) program[145] is responsible for executing this function by collecting, processing, and presenting this data, and then sharing information about how the tax system works with other government agencies and the general public.

SOI publishes data on the IRS Tax Statistics[146] website. Information on corporate income tax liability is located under Corporation Tax Statistics[147], and SOI aggregates the tax data separately for S-corporations[148].

SOI presents the data in various ways for corporations, including by size, type of return, and sector or industry. The data by sector or industry is aggregated by the NAICS[149] industrial sectors, and then further by major and minor industry classifications. The total federal income tax

[144] DOI, "Citizens Report: Summary of Performance & Finances for FY 2014," n.d., https://www.doi.gov/sites/doi.gov/files/migrated/pfm/upload/FY-2014-DOI-Citizens-Report.pdf

[145] IRS, "SOI Tax Stats—Statistics of Income," n.d., http://www.irs.gov/uac/SOI-Tax-Stats-Statistics-of-Income

[146] IRS, "Tax Statistics," n.d., http://www.irs.gov/uac/Tax-Stats-2

[147] IRS, "SOI Tax Stats—Corporation Tax Statistics," n.d., http://www.irs.gov/uac/SOI-Tax-Stats-Corporation-Tax-Statistics

[148] IRS, "SOI Tax Stats—S Corporation Statistics," n.d., http://www.irs.gov/uac/SOI-Tax-Stats-S-Corporation-Statistics

[149] US Census, "Introduction to North American Industry Classification System," n.d., http://www.census.gov/eos/www/naics/

Statistics on corporate income taxes relative to companies performing extractive activities are generally classified under the NAICS **Mining** major industry. In addition, integrated companies that operate in both the downstream extractive and refining spaces are classified under the NAICS **Petroleum and Coal Products Manufacturing** major industry.

liability reported by industry should be interpreted with care because industry classification of companies with multiple lines of business are classified into an industry category based on the taxpayer's determination of the business activity from which it derives the highest percentage of its total receipts.

SOI's calculations of total US federal corporate income tax receipts from all returns in the mining and petroleum refining sectors for tax years 2009 to 2013 are presented in the table below.

Calculated Federal Corporate Income Tax Receipts for Mining and Petroleum Industries 2009–2013 in Millions of US Dollars[1]

Industry (Major / Minor)	Total Receipts—All Returns ($ in millions)[2]				
	2009	2010	2011	2012	2013
Mining (Major)	**$3,831**	**$5,722**	**$5,941**	**$5,249**	**4,896**
Oil and gas extraction	$1,424	$2,152	$1,811	$1,642	1,943
Coal mining	$207	$344	$325	$245	32
Metal ore mining	$866	$1,573	$1,945	$1,329	755
Nonmetallic mineral mining and quarrying	$181	$158	$183	$233	222
Support activities for mining	$1,153	$1,494	$1,677	$1,800	1,944
Petroleum and Coal Products Manufacturing (Major)	**$1,897**	**$5,126**	**$7,630**	**$9,223**	**6,908**
Petroleum refineries (including integrated)	$1,772	$4,865	$7,402	$9,064	6,631

[1]IRS, "SOI Tax Stats—Returns of Active Corporations—Table 1," n.d., http://www.irs.gov/uac/SOI-Tax-Stats-Returns-of-Active-Corporations-Table-1

[2]All figures are estimates based on samples.

Publicly Available Federal Corporate Income Tax Information from Company Filings

Publicly listed companies are required to report tax information in a variety of ways in their annual financial statement filings, including on their statements of cash flows, their income statements, and their balance sheets.[150] Depending on the geographic scope of a company's activities, it may be subject to income taxes at the federal, state, local, and / or foreign levels, which are generally reported as a single aggregate sum of the various types of tax paid during a financial reporting period.

Companies that are not publicly listed are generally not required to publish any of the tax disclosures discussed above.

In 2010, the United States enacted the Dodd-Frank Act, which requires US-listed extractive companies to separately disclose information about payments to governments around the world, including their US federal corporate income tax payments. The Securities and Exchange Commission (SEC) is rewriting the rule and has stated that it will be proposed in the spring of 2016. Once finalized, publicly traded US companies will report according to the law and the rule.

Wage and Salary Employment

According to the BEA, 808,000 people drew their wages or salaries from work in the extractive industries[151] in the United States in 2013. Total full-time and part-time employment in the United States was 141,202,000 in 2013, meaning that roughly 0.6% of all US workers were employed in the extractive industries. Within extractive industries, Support Activities for Mining provided the largest number of wage and salary jobs.

[150] Additional details to support these disclosures on the financial statements can be found in the accompanying notes, which are an integral part of these disclosures.

[151] Extractive industries are defined as NAICS sector 21, "Mining," which does not include renewable energy industries.

Full-Time and Part-Time Wage and Salary Employees by Industry in 2013[1]

Industry	Employees
US Total	141,202,000
Extractive Industries	808,000
Oil and Gas Extraction	196,000
Mining, Except Oil and Gas	210,000
Support Activities for Mining	402,000

[1]BEA, "National Data," August 6, 2015, http://www.bea.gov/itable/

In 2013, 808,000 full-time and part-time employees translated into 795,000 full-time equivalent (FTE) employees across extractive industries.

Full-Time Equivalent Employees by Industry in 2013[1]

Industry	FTE Employees
US Total	125,634,000
Extractive Industries	795,000
Oil and Gas Extraction	193,000
Mining, Except Oil and Gas	207,000
Support Activities for Mining	395,000

[1]BEA, "National Data," August 6, 2015, http://www.bea.gov/itable/

To access wage and salary employment data in the renewable energy industries, visit the Bureau of Labor Statistics (BLS) Quarterly Census of Employment and Wages and look under the utilities sector. (http://www.bls.gov/cew/apps/data_views/data_views.htm#tab=Tables)

In 2013, there was an annual average of 1,231 jobs in solar electric power generation (NAICS code 221114), 3,176 in wind electric power generation (NAICS code 221115), and 1,094 in geothermal power generation (NAICS code 221116).

Self-Employed, Sole Proprietors, and Partnerships

In addition to the 808,000 people that drew wages or salaries from extractive industries in 2013, there are thousands of self-employed people working across the extractive industries. According to the BEA's national directorate, in 2013 there were 16,000 self-employed people working in the extractive industries, defined "as active proprietors and partners that devote a majority of their working hours to their unincorporated businesses."[152]

Self-Employed Persons by Industry in 2013[1]

Industry	Self-Employed Persons
US Total	9,408,000
Extractive Industries	16,000

[1] BEA, "National Data," August 6, 2015, US Department of Commerce, Bureau of Economic Analysis, "6.7D Self-Employed Persons by Industry," http://www.bea.gov/iTable/iTable.cfm?ReqID=9&step=1#reqid=9&step=1&isuri=1&903=205

Furthermore, the BEA regional directorate calculates an additional measure of the number of self-employed people working in extractive industries. The BEA regional directorate's numbers capture sole proprietors, unincorporated partnerships, and incorporated small businesses and partnerships—a broader measure than the BEA national directorate's count. The BEA's regional directorate also uses a different methodology and different underlying data sources than the national directorate, which result in some double counting. Using the regional BEA data, the number of sole proprietors and partners receiving income from and working in the extractive industries was roughly 799,000 people in 2013.

The BEA regional directorate determines the number of sole proprietors and partners by using IRS tax forms that individuals and partners file at the end of each year. The BEA counts the number of 1040 Schedule C forms submitted to the IRS to tally the number of sole proprietors in an industry, and performs a calculation to estimate the number of people in partnerships using 1065 forms. Some individuals are double counted, depending on how many Schedule C forms a person submits or how likely a single person is to appear on multiple 1065 forms. Furthermore, for data collected from Schedule C forms, the BEA regional directorate does not distinguish between active proprietors that manage businesses, and passive proprietors that only have investment interest in businesses.

[152] BEA, "National Data," August 6, 2015, US Department of Commerce, Bureau of Economic Analysis, "6.7D Self-Employed Persons by Industry," http://www.bea.gov/iTable/iTable.cfm?ReqID=9&step=1#reqid=9&step=3&isuri=1&903=205

Estimate of Sole Proprietors and Partners by Industry in 2013[1]

Industry	Estimate of Sole Proprietors and Partners
US Total	40,867,200
Extractive Industries	799,000
Oil and Gas Extraction	625,000
Mining, Except Oil and Gas	95,000
Support Activities for Mining	79,000

[1]This estimate was calculated by subtracting BEA's 2013 full-time and part-time wage and salary employment numbers from BEA's 2013 full-time and part-time employment by NAICS industry numbers. Specifically, the following source was used: BEA, "Regional Data: GDP & Personal Income," July 2015, http://www.bea.gov/itable/iTable.cfm?ReqID=70&step=1#reqid=70&step=30&isuri=1&7022=4&7023=0&7024=naics&7033=-1&7025=0&7026=00000&7027=2013&7001=44&7028=-1&7031=0&7040=-1&7083=levels&7029=30&7090=70, http://www.bea.gov/itable/iTable.cfm?ReqID=70&step=1#reqid=70&step=1&isuri=1&7022=5&7023=0&7024=naics&7033=-1&7025=0&7026=00000&7027=2013&7001=45&7028=-1&7031=0&7040=-1&7083=levels&7029=31&7090=70

SOC IS USED BY THE FEDERAL GOVERNMENT TO CLASSIFY WORKERS BY THEIR OCCUPATIONS. THERE ARE 840 DETAILED OCCUPATIONS, 13 SPECIFIC TO EXTRACTION WORKERS.

People working in the extractive industries work a range of occupations, many of which are similar to other industries, such as bus drivers, executives, and computer and information analysts. However, some people that work in the extractive industries have occupations unique to the industry, and they are called extraction workers. In May 2013, the estimated number one extraction worker occupation involved assembling or repairing oil field equipment using hand and power tools. The table below lists the top five extraction worker occupations, as well as the BLS Standard Occupational Classification (SOC) description for each.

May 2013 Top Five Extraction Worker Detailed Occupations[1]

Total Jobs	Detailed Occupation	SOC Description
68,230	Roustabouts, Oil and Gas	Assemble or repair oil field equipment using hand and power tools. Perform other tasks as needed.
59,260	Service Unit Operators, Oil, Gas, and Mining	Operate equipment to increase flow from producing wells or to remove stuck pipe, casing, tools, or other obstructions from drilling wells. May also perform similar services in mining exploration operations. Includes fishing-tool technicians.
27,130	Rotary Drill Operators, Oil and Gas	Set up or operate a variety of drills to remove underground oil and gas, or remove core samples for testing during oil and gas exploration.
23,020	Helpers, Extraction Workers	Help extraction craft workers, such as earth drillers, blasters and explosives workers, derrick operators, and mining machine operators, by performing duties and requiring less skill. Duties include supplying equipment or cleaning work area.
22,400	Derrick Operators, Oil and Gas	Rig derrick equipment and operate pumps to circulate mud through drill hole.

[1] BLS, "Occupational Employment Statistics," Section 47-5000 (5011–5099), "Standard Occupation Classifications," n.d., http://www.bls.gov/oes/2013/may/oes_stru.htm#47-0000; Standard Occupation Classifications: http://www.bls.gov/soc/2010/soc470000.htm

Exports

In 2013, the United States exported $137,558 million in petroleum end-use goods, 8.6% of all US exports totaling $1,592,784 million.[153] The United States is now a net exporter of petroleum products and coal, although still a net importer of natural gas and crude oil.[154] Natural resource commodity exports, meaning commodities that underwent minimal processing, made up approximately $22,000 million in goods produced in the United States and sold abroad.

2013 US Exports by Natural Resource Commodity in Millions of US Dollars[1]

Natural Resource Commodity[2]	$ in Millions
Bituminous coal, not agglomerated	$8,949
Natural gas, gaseous	$5,560
Crude oil from petroleum and bituminous miner	$4,108
Copper ores and concentrates	$2,302
Agglomerated iron ores	$922
Coal NESOI[3], not agglomerated	$172
Precious metal ores and concentrates (including gold)	$140
Total	$22,153

[1] US Census Bureau, "Foreign Trade Data," n.d., https://www.census.gov/foreign-trade/statistics/state/data/index.html

[2] Data included from harmonized system code. Codes used are related to natural resource extraction and not processing (such as petroleum). HS-6 codes 260112, 260300, 261690, 270112, 270119, 270900, 271111, 271121. Valued in 2014 dollars.

[3] Not elsewhere specified or included (NESOI)

2013 US Exports by Natural Resource Commodity Volume[1]

Natural Resource Commodity	Production Units
Crude oil	48,968 thousand barrels
Natural gas plant liquids and liquefied refinery gases	170,941 thousand barrels
Compressed natural gas and liquefied natural gas	1,572,413 million cubic feet
Other liquids (hydrogen/oxygenates/renewables/ other hydrocarbons, unfinished oils, motor and aviation gas)	130,881 thousand barrels
Iron ore	11 million metric tons
Copper ores and concentrates	348 thousand metric tons
Refined copper	113 thousand metric tons
Gold (refined bullion, doré, ores, concentrates, precipitates)	691 metric tons
Metallurgical coal	65,678,865 short tons
Steam coal	51,980,403 short tons

[1] USGS, "Commodity Statistics and Information," n.d., http://minerals.usgs.gov/minerals/pubs/commodity/; "Commodity Statistics and Information: Iron ore," n.d., http://minerals.usgs.gov/minerals/pubs/commodity/iron_ore/mcs-2015-feore.pdf; "Commodity Statistics and Information: Copper," n.d., http://minerals.usgs.gov/minerals/pubs/commodity/copper/mcs-2015-coppe.pdf,; "Commodity Statistics and Information: Gold," n.d., http://minerals.usgs.gov/minerals/pubs/commodity/gold/mcs-2015-gold.pdf; EIA, "Petroleum & Other Liquids," n.d., http://www.eia.gov/dnav/pet/pet_move_expc_dc_NUS-Z00_mbbl_a.htm; EIA, Coal Data Browser, n.d., http://www.eia.gov/beta/coal/data/browser/#/topic/41?agg=2,1,0&rank=ok&linechart=COAL.EXPORT_QTY.TOT-TOT-TOT.A&columnchart=COAL.EXPORT_QTY.TOT-TOT-TOT.A&map=COAL.EXPORT_QTY.TOT-TOT-TOT.A&freq=A&ctype=map&ltype=pin&rtype=s&pin=&rse=0&maptype=0; EIA, "US Natural Gas Exports and Re-Exports by Country," http://www.eia.gov/dnav/ng/NG_MOVE_EXPC_S1_A.htm; EIA, "Exports of Crude Oil and Petroleum Products by PAD District," http://www.eia.gov/petroleum/supply/annual/volume1/pdf/table31.pdf

[153] US Census Bureau, US Trade in International Goods and Services, "Exhibit 9. Exports, Imports, and Balance of Goods, Petroleum and Non-Petroleum End-Use Category Totals," n.d., http://www.census.gov/foreign-trade/Press-Release/2014pr/07/exh9.pdf

[154] EIA, "US energy imports and exports to come into balance for first time since 1950s," April 15, 2015, http://www.eia.gov/todayinenergy/detail.cfm?id=20812

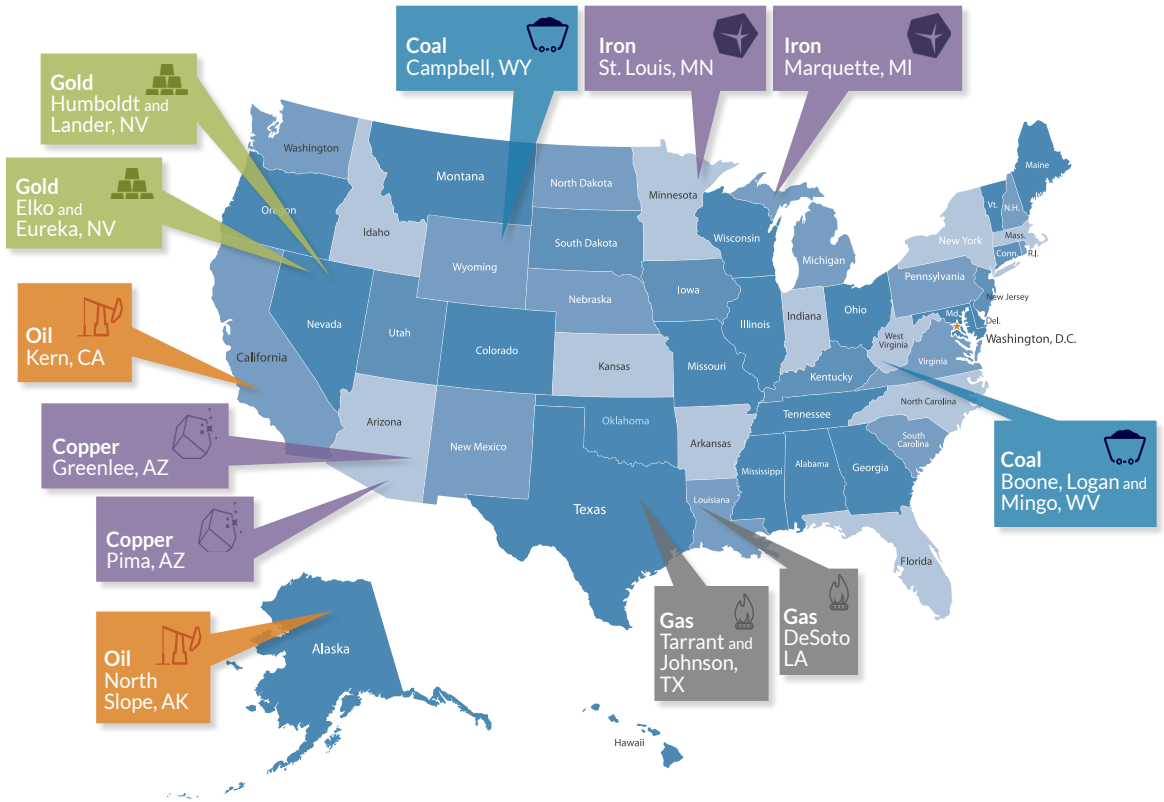
How does revenue from natural resource extraction impact counties and local communities?

While extractive industries make up 2.6% of 2013 US GDP, they play a much larger role in some local communities. For example, extractive industries make up more than a third of the State of Wyoming's GDP.[155] At the county level, certain communities and local economies may be even more dependent on extractive industries.

To improve transparency at the county level, the online report includes 12 case studies that provide a snapshot into communities that, over approximately the last decade, have led US counties in producing oil, gas, coal, gold, iron, or copper. The MSG selected these counties, or in some cases

[155] BEA, as cited on the Wyoming Department of Administration & Information Economic Analysis Division, 2013, http://eadiv.state.wy.us/i&e/WyoGDP97_13.htm

Twelve Communities Explored through County Case Studies



clusters of counties given geological formations, based on their high levels of production. The county case studies are designed to help readers understand the economic and fiscal effects of oil, gas, coal, and mineral extraction on local communities, including revenue sustainability.

Visit the online report to see the 12 case studies for each of these communities. Learn about the history, geology, production, employment, revenue, and fiscal costs for each of the extractive industries profiled in these counties.

For an example of an estimation of both the benefits and costs of extraction at the state and county level, see "Economic Assessment Report for the Supplemental Generic Environmental Impact Statement on New York State's Oil, Gas, and Solution Mining Regulatory Program." (http://www.dec.ny.gov/docs/materials_minerals_pdf/rdsgeisecon0811.pdf)

Revenue Sustainability

Each of the 12 county narratives includes information on revenue and costs associated with extractive industries, when found in publicly available government sources, to provide the reader with information regarding revenue sustainability at the local level. Local governments and communities often consider the numerous ways in which natural resource management and extraction can affect their fiscal health. One of the most significant considerations is the sustainability of the revenue local governments receive due to natural resource extraction. Multiple EITI guiding principles reference revenue sustainability as a critical factor in making natural resource wealth "an engine for sustainable economic growth."[156] However, when it comes to managing this critical factor, there are two challenges localities need to address:

1. The sustainability of revenue over time given that revenue fluctuates with natural resource commodity prices, and that fossil fuels and hardrock mineral deposits are finite or may not be economically extractable based on current technology
2. The net sustainability of revenue given the fiscal benefits of increased revenue from extractive activities and the fiscal costs of increased government expenditures necessary to support extractive activities

[156] EITI International Secretariat, The EITI Standard, January 2015, p. 9, https://eiti.org/files/English_EITI_STANDARD.pdf

These revenue sustainability considerations are magnified at the local level in the United States: A significant influx or loss of natural resource revenue can have a material impact, both positive and negative, on the quality and variety of services that a local government can provide its residents. Therefore, in order to achieve sustainable economic prosperity, local governments must consider how they can best use natural resource revenue to promote long-term growth and investment in their communities, and how to ensure that the financial benefits of extraction outweigh the costs in the short and long term.

County Revenue

At the county level, revenue received from extractive activities takes many forms. For example, some payments originate from taxes on land ownership, while others are based on ownership of the natural resource itself. There are also different methods of valuation ranging from payments at the point-of-sale, to annual taxes, to those based on an estimated value of the natural resource. For the purposes of this report, the four most common types of revenue examined include: property taxes, sales and use taxes, state transfer payments, and additional production taxes.

- **Property taxes / ad valorem**: Taxes paid by owners of oil and gas or mineral properties to the county government based on the value of the property
- **Sales and use taxes:** Though not a direct result of natural resource extraction, revenue from sales and use taxes can rise dramatically during resource extraction booms when population and economic activity increase
- **State transfer payments:** Revenue transferred to the county by the state that comes from sources such as:
  - Severance taxes paid by extractive industries to the state based on the volume and / or value of the resources extracted
  - Lease payments, such as bonuses, rents, and royalties, paid by extractive industries to a public land and mineral owner—either the federal government or the state
- **County production taxes:** Severance taxes or other payments paid by extractive industries to the county based on the volume or value of resources extracted, or per lease terms if the county is the landowner

County Costs

More often than not, local governments must also make financial investments in their communities to support the extractive industries. These can vary based on the size of the community, the state of its current infrastructure, and the type of natural resources extracted (e.g., coal mining versus natural gas drilling). In some circumstances, these costs are outweighed by the influx of revenue, while in other cases costs can result in net negative fiscal effects on local governments.[157] Given these possibilities and considerations, the MSG prioritized four types of fiscal costs at the local level for this year's report—transportation, water, site reclamation, and emergency services—each defined as follows:

- **Transportation**: The cost of constructing new transportation infrastructure (e.g., roads or trains) or repairing current infrastructure due to heavy industry use
- **Water:** The cost of constructing new water or sewer infrastructure (e.g., water pipelines, treatment plants) to meet the needs of extractive industries, upgrading current infrastructure, or treating additional wastewater from extractive activities in the public wastewater treatment system
- **Reclamation:** The cost of returning mines or oil and gas lands to their state prior to disturbance, including physical site stability and ecosystem functions, and long-term site monitoring (note: today's companies are legally responsible for current reclamation costs and pay SMCRA fees towards historic abandoned mines)
- **Emergency Services:** The cost of new emergency services (e.g., firehouses, ambulances, chemical spill equipment) needed to support extractive industries and protect the public from possible health and safety hazards

There are additional fiscal benefits and burdens associated with extractive activities beyond those addressed in this report. For example, a local government may receive in-kind revenue from extractive industries, such as payment for a new public road that company employees will also use to access work sites. Another fiscal cost may be the additional government staff needed to manage growing public services required to support extractive activities. While all are worthy of careful consideration by local communities and governments, this year's report begins this discussion by focusing on the revenue and costs as defined above.

More information about the process of identifying contaminated sites can be found here.[158] More information about the AML Program can be found here.[159] A database of AML's projects (E-AMLIS) can be found here.[160]

[157] Duke University Energy Initiative, "Shale Public Finance: Local government revenues and costs associated with oil and gas development," Abstract p. 1, May 29, 2014, D. Raimi and R.G. Newell http://dukespace.lib.duke.edu/dspace/handle/10161/9216

[158] GAO, "HAZARDOUS WASTE: Agencies Should Take Steps to Improve Information on USDA's and Interior's Potentially Contaminated Sites," n.d., http://www.gao.gov/products/GAO-15-35

[159] OSMRE, "Reclaiming Abandoned Mine Lands," n.d., http://www.osmre.gov/programs/AML.shtm

[160] OSMRE, E-AMLIS database, https://amlis.osmre.gov/Default.aspx

THE ABANDONED MINE LAND RECLAMATION PROGRAM

Abandoned mines present a specific challenge to reclamation efforts, including those faced by counties and local communities. Abandoned mines—coal or hardrock mineral excavation sites left as-is when mining activity ends—pose safety and environmental threats to surrounding communities. Abandoned mines can contaminate ground water, emit toxic waste, and cause injury when unsteady infrastructure collapses.

Prior to 1977, coal mining companies had no legal responsibility under federal law to restore mines to their previous condition, which often resulted in inactive or abandoned mines. Today, the Surface Mining Control and Reclamation Act of 1977 (SMCRA) in the case of coal mining, as well as state legislation in the case of hardrock mining, hold companies financially responsible for site reclamation. These statutes require companies to post a reclamation bond—a financial commitment that covers the cost of reclaiming a mining site—in order to obtain a mining permit. The government holds the bond throughout the mining operation, releasing it at the end only if the company fully restores the mine lands. Otherwise, the government keeps the bond to fund the mine's reclamation.

To address abandoned mines from operations prior to 1977, the SMCRA established the Abandoned Mine Land (AML) Reclamation Program. The AML Program is completely funded through fees placed on current day coal production. Coal companies pay a fee of $0.28 per ton of surface coal produced and $0.12 per ton of subsurface coal produced to the AML fund.[1] Since 1978, the coal industry has contributed $10.7 billion to the AML fund[2] Approximately $8.2 billion has been appropriated.[3]

[1] OSMRE, "Payer Handbook," May 20, 2014, n.d., https://sscr.osmre.gov/public/Handbook/Documents/payerhandbook2013.htm#top1

[2] DOI, "Budget Justifications and Performance Information Fiscal Year 2016," n.d., https://www.doi.gov/sites/doi.gov/files/migrated/budget/appropriations/2016/upload/FY2016_OSMRE_Greenbook.pdf

[3] Ibid.

ABANDONED MINE LAND FUND NUMBERS

- $10.7 billion paid into the AML fund
- $8.2 billion appropriated
- $3.8 billion spent on reclaiming 809,936 GPRA acres

Methodology

This report uses a range of publicly available online information to compile the county case studies, including government databases, documents, and reports, as well as online information produced by councils of governments. In this manner, the case studies integrate data and analysis already reported elsewhere by government bodies. Local data sources were prioritized, and data was collected and presented at the most granular level available. For example, state information took the place of county information when the latter was not available.

County and state budget documents and state agency websites were the primary data sources. Federal agency websites and reports also provided critical information on employment in extractive industries, proved reserves of various natural resources, and production estimates. Any nongovernmental sources used were approved by the MSG.

This year's data collection process was the first step in bringing information about extractive industries' impacts on local communities and governments to the public in a clear, digestible way. The MSG conducted outreach with each county profiled in the report to communicate the purpose and status of the USEITI, verify content, and lay the foundation for further collaboration in subsequent years.

To learn more about the interactions between local communities, governments, and extractive industries, consider reviewing:

- Nongovernmental websites and publications
- Industry reports and public tax filings
- Energy think tank memos
- Industry association reports
- University publications
- EISs

In the United States., members of the public can also request government data that is not online or otherwise accessible through a Freedom of Information Act request.

(http://www.foia.gov/how-to.html)

8

REVENUE PAYMENT DATA REPORTING AND RECONCILIATION

Revenue Payment Data Reporting and Reconciliation

What is the scope of the revenue payment data reconciliation?

Requirement 4 of the EITI Standard outlines the responsibility of the MSG to determine the scope of EITI reporting in the United States. In carrying out this responsibility, the MSG considered information from a variety of sources before coming to a consensus on the scope for the 2015 USEITI Report.

EITI Standard Requirement 4.1 (a): "...In establishing materiality definitions and thresholds, the multi-stakeholder group should consider the size the of revenue streams relative to total revenues..."

EITI Standard Requirement 4.2 (a): "...All government entities receiving material revenues are required to comprehensively disclose these revenues in accordance with the agreed scope."

The MSG publishes meeting minutes and materials for all subcommittee and full MSG meetings on the MSG website.[161] These minutes and materials document the MSG's historical considerations and decisions around scoping. Please refer to *Appendix A: Revenue Reporting Considerations* within the *Extractive Revenue Appendix* for additional background on the scoping process for the USEITI.

In-Scope Revenue Streams and Government Entities

During the scoping process, the MSG identified the different revenue streams received by government agencies from extractive industries companies. The MSG then decided which revenue streams to include in-scope for the reconciliation in the 2015 USEITI Report. The MSG considered many factors in evaluating revenue streams, including the magnitude of the revenue and the relative complexity of gathering and reporting the data from companies. The table on the next page lists government entities and revenue streams selected by the MSG as in-

[161] DOI, "USEITI MSG Meetings," n.d., https://www.doi.gov/eiti/FACA/meetings

scope for reconciliation. Please also refer to *Appendix B: In-Scope Revenue Streams*, page 24, within the *Extractive Revenue Appendix* for additional descriptions of these revenue streams.

In-Scope Government Entities and Revenue Streams

Government Entity	In-Scope Revenue Streams
DOI—ONRR	Bonuses Rents Royalties Other Revenue Offshore Inspection Fees Civil Penalties
DOI—BLM	Bonus and First Year Rentals Permit Fees Renewable Energy Collections
DOI—OSMRE	Abandoned Mine Lands (AML) Fees Including Audits and Late Charges Civil Penalties Including Late Charges
IRS	Federal Corporate Income Tax Payments

In-Scope Reporting Entities

The MSG identified that ONRR collects a majority of DOI's extractive industries-related revenue. The MSG decided to use ONRR's reported revenue as a proxy for DOI revenue to establish the materiality threshold for reporting. The MSG decided on a materiality threshold for the 2015 USEITI Report of $50 million total annual revenue reported to ONRR by a parent company, including its subsidiaries, which was presented and approved as part of the USEITI candidacy application.[162] The MSG agreed on this threshold because it would allow at least 80% of ONRR's revenue to be in-scope for the reconciliation. A more detailed analysis of ONRR revenue data revealed that the $50 million threshold resulted in 84% of ONRR revenue being in-scope for the reconciliation. DOI's unilateral disclosure covers 100% of revenue from all companies operating within the US.

Based on the materiality threshold defined by the MSG for reconciliation in the 2015 USEITI Report, the MSG identified 45[163] companies for inclusion in the reconciliation, which are listed on the subsequent page.

[162] USEITI, "EITI Candidacy Application Form," n.d., http://www.cbuilding.org/sites/default/files/USEITI_Candidacy_Application_Approved_0.pdf

[163] The IA noted that the MSG's original scoping only identified 44 reporting companies meeting the threshold of $50 million in payments to ONRR. In June 2015, it was determined that some revenue attributed to Fieldwood Energy LLC should have been attributed to Apache Corporation. After this correction, Apache Corporation's revenue met the $50 million threshold, and it was added to the list of in-scope companies. In June 2015, it was determined that ONRR revenue for Continental Resources had been overstated during the scoping process. The adjustment removed $26,000,510 in revenue that was for BLM bonuses and first year rentals. Also, it also reduced Continental Resources' total ONRR revenue to $25,878,571, which was under the reconciliation scoping threshold. Based on this adjustment, Continental Resources should not have been identified as an in-scope company. Continental Resources is included as part of this report due to the timing of the scoping issue identification.

In-Scope Companies	
Alpha Natural Resources, Inc.	Fieldwood Energy LLC
Anadarko Petroleum Corporation	Freeport-McMoRan Inc.
ANKOR Energy LLC	Hess Corporation
Apache Corporation	Linn Energy, LLC
Arch Coal, Inc.	LLOG Exploration Company LLC
Arena Energy, LLC	Marathon Oil Company
BHP Billiton LTD	Newfield Exploration Company
BOPCO, LP	Noble Energy, Inc.
BP America	Oxy USA, Inc.
Chevron Corporation	Peabody Energy Corporation
Cimarex Energy Co.	QEP Resources, Inc.
Cloud Peak Energy Resources, LLC	Repsol E&P USA Inc.
Cobalt International Energy, Inc.	SandRidge Energy, Inc.
Concho Resources, Inc.	Shell E&P Company
ConocoPhillips	Statoil Gulf of Mexico
Continental Resources, Inc.	Stone Energy Corporation
Devon Energy Corporation	Talos Energy LLC
Encana Corporation	Ultra Resources Inc.
Energy XXI	Venari Offshore LLC
EPL Oil & Gas, Inc.	W&T Offshore, Inc.
ENI Petroleum	Walter Oil & Gas Corporation
EOG Resources, Inc.	WPX Energy, Inc.
Exxon Mobil Corporation	

Basis and Period of Reporting

The period of the reconciliation was CY 2013 (January 1, 2013 through December 31, 2013). Reporting companies and government entities reported data for payments made or reported in CY 2013. The reporting currency for the 2015 USEITI Report was US dollars (USD). Companies reported data at the consolidated entity level, including data for all identified subsidiary entities.

How did the Independent Administrator perform the reconciliation?

Based upon Requirement 5.1 of the EITI Standard, the IA performed the reconciliation of company payments and government revenue as follows:

Data Collection

The IA distributed the 2015 USEITI reporting and reconciliation package to reporting companies on March 4, 2015. The package included a cover letter summarizing the USEITI process, a Data Reporting Template[164], a reporting template guidelines document[165] with detailed reporting instructions, and IRS Form 8821[166], which is required

[164] USEITI, "Reporting Template," n.d., https://www.doi.gov/sites/doi.gov/files/migrated/eiti/upload/USEITI-Reporting-Template-03042015-1.pdf

[165] USEITI, "USEITI Reporting Template Guidelines," n.d., https://www.doi.gov/sites/doi.gov/files/migrated/eiti/upload/USEITI-Reporting-Template-Guidelines-030415-1.pdf

[166] IRS, Form, n.d., https://www.doi.gov/sites/doi.gov/files/migrated/eiti/upload/Form-8821-IRS-USEITI.pdf

to authorize the IRS to disclose tax data to the IA for the reporting companies participating in reconciliation of taxes.

The reporting process included the following steps:

- Reporting companies submitted completed reporting templates directly to the IA.
- For all DOI revenue streams, ONRR managed the process of gathering data from each of the in-scope DOI bureaus and submitted the combined DOI bureau data to the IA for reconciliation.
- For reporting companies that made the decision to allow for tax reconciliation, the IRS provided the data directly to the IA for reconciliation. Due to federal tax confidentiality laws, these reporting companies have to authorize the IRS to release corporate tax payment data to the IA through the use of IRS Form 8821.

Data Reconciliation

The IA reconciled the data by comparing the reported amounts from reporting companies to the reported amounts from government entities and identifying any variance amounts. The IA then compared any variance amounts to an investigation threshold known as the Margin of Variance.

EITI Standard Requirement 2.3: The multi-stakeholder group is required to agree to the accounting period covered by the EITI report.

EITI Standard Requirement 5.1: "The reconciliation of company payments and government revenues must be undertaken by an Independent Administrator applying international professional standards…"

Margin of Variance

The MSG considered and approved a Margin of Variance for the IA to apply during the reconciliation. The purpose of the Margin of Variance was to establish a threshold above which variances in reported payments required further evaluation. The MSG determined that variances below the Margin of Variance did not require further evaluation. Variances that were below the respective threshold were presented as-is, with no further consideration. Variances that exceeded the respective threshold were subject to further evaluation and explanation.

The MSG and the IA scoped out the potential causes of differences between amounts reported by in-scope reporting companies and government entities for each revenue stream included in the USEITI reconciliation process.

Based upon the type, magnitude, and likelihood of variances for in-scope revenue streams, a variance percentage threshold and a variance floor threshold were assigned to each revenue stream.

- *Variance percentage threshold*: If the variance amount when divided by the amount reported by the government was greater than the variance percentage for that revenue stream, the IA considered the variance to exceed the threshold, and then assessed whether the variance floor threshold applied.
- *Variance floor threshold*: This was the minimum dollar threshold for a variance and only applied if a variance exceeded the variance percentage threshold. If the variance exceeded the variance percentage threshold and exceeded the variance floor threshold, the IA performed further evaluation of the variance.

Three anticipated reasons for variance were:

- Attributing payment information to different revenue streams
- Recording a payment and a receipt of payment in different reporting periods
- Reporting based on different sets of company payor entities

EITI Standard Requirement 5.3 (a): "In accordance with the Term of Reference, the Independent Administrator should prepare an EITI Report that comprehensively reconciles the information disclosed by the reporting entities, identifying any discrepancies."

The table below outlines the Margin of Variance thresholds applied by the IA, which were approved by MSG.

Margin of Variance Thresholds

Revenue Stream	Variance Percentage	Variance Floor
ONRR Royalties	1%	$100,000
ONRR Rents	2%	$50,000
ONRR Bonuses	2%	$100,000
ONRR Other Revenue	3%	$50,000
Offshore Inspection Fees	2%	$20,000
Civil Penalties	1%	$1,000
BLM Bonus and First Year Rentals	2%	$10,000
BLM Permit Fees	3%	$10,000
BLM Renewables	N/A	N/A
OSMRE AML Fees including Audits and Late Charges	2%	$100,000
OSMRE Civil Penalties including Late Charges	3%	$0
Taxes	1%	$100,000

Where variances were greater than the Margin of Variance thresholds, the IA requested additional transaction-level details from the government entity and reporting company and attempted to identify potential sources of the variance.

After reviewing the data provided by both the government entity and the reporting company, if the IA was able to identify the potential source of the variance, the IA provided an explanation. If the IA was not able to identify the potential source of the variance, the IA provided an explanation that the source of the variance could not be resolved.

Both reporting companies and government entities were given the opportunity to revise their reported amounts when the reconciliation process identified the explanation for a variance, but restatement was not required. If a reporting company or government entity resubmitted revised numbers for a revenue stream, only the final submitted numbers are shown in the reconciliation results. In many cases, neither the government nor company chose to resubmit the numbers because the variance resulted from different business systems rather than a mistake.

What are the reporting and reconciliation results?

When the IA compared company payments to government revenue, 17 discrepancies exceeded the Margin of Variance. The IA worked with in-scope companies and government entities to investigate these discrepancies, and was able to identify explanations for all discrepancies. Explanations included differences regarding when payments were recorded and how they were classified.

Out of the 45 companies invited to report and reconcile, many chose to participate, reporting and reconciling billions of dollars. Complete details of the reporting and reconciliation results by reporting company, including a breakout and explanation of variances exceeding the Margin of Variance thresholds, are included in *Appendix C: Reporting and Reconciliation Results Detail* of the *Extractive Revenue Appendix*.

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INDEPENDENT ADMINISTRATOR RECOMMENDATIONS

Independent Administrator Recommendations

What are the IA's recommendations?

Recommendation 1: Scoping

OBSERVATION: The USEITI candidacy application identified scoping assumptions for year one and calls for scoping to be revisited in year two.

RECOMMENDATION: At the beginning of the 2016 reporting period, the MSG should thoroughly scope:

- Reporting companies
- Revenue streams
- Commodities to be included in the 2016 USEITI Report

The IA is prepared to assist the MSG in this scoping. The scoping should include communication with potential reporting companies to confirm their related-payor entities prior to beginning the reconciliation process. The scoping should be performed prior to the start of the reporting and reconciliation process.

Recommendation 2: Reporting Entity Communication

OBSERVATION: The knowledge and understanding of reporting companies increased throughout the reconciliation process. MSG outreach was effective and appreciated, and the amount of communication that companies received was a large driver of their understanding of the process.

RECOMMENDATION: The MSG should consider additional outreach and communication channels regarding the USEITI reporting and reconciliation process. Specifically:

- The 90-day reporting period for the 2015 USEITI should be extended to 120 days, with communication prior to that period.
- Webinars focused on tax reporting and reconciliation should be conducted (in addition to those on revenue reporting) for tax professionals in reporting companies and include Treasury and IRS participation.

Recommendation 3: Sample Approach for Data Reconciliation

OBSERVATION: Given the scale and complexity of the US extractive industries, preparation of reconciliation data as part of the 2015 USEITI Report consumed significant time and resources of both the government and the reporting companies. Reporting and reconciliation extended three months beyond the reporting deadline. Some areas of the reconciliation consumed significant time with minimal results. For example, reconciling BLM Permit Fees consumed significant time despite the fact that the amounts involved were relatively small and there were no unexplained variances.

RECOMMENDATION: The MSG should consider alternative options for reconciliation that could satisfy the requirements of the EITI Standard with a lower investment of time and cost in the reconciliation process. Specifically, the IA should support the MSG in developing options for consideration by the EITI International Secretariat, including:

- A sample-based reconciliation approach
- Development of a portal in which reporting companies can confirm whether revenue reported as part of the unilateral disclosure match company records

The implementation of one or more of these approaches may enable a similar level of transparency to the current process, while allowing fuller participation by reporting companies. It may also enable the direction of additional resources to other areas, such as outreach to the public, preparation of more detailed and interactive contextual information, subnational reporting, and other areas identified by the MSG.

Recommendation 4: Enhanced, Phased Rollout for the Online Report

OBSERVATION: The MSG aims to make data and information available to the general public in an engaging and user-friendly manner.

RECOMMENDATION: The MSG should increase the percentage of the contextual narrative that lives solely online, as well as create a phased rollout for future online content updates, preferably on a quarterly basis. Moving additional content online would allow for a more engaging and accessible presentation of the contextual narrative information. The MSG could implement awareness campaigns framed around quarterly updates to the online report, which could generate increased public engagement.

Recommendation 5:
Increased State, Local, and Tribal Contextual Narrative Content

OBSERVATION: In the United States, extractive industries have impacts at the local level. Some communities are more dependent on certain industries than others, and the local legal and fiscal regimes vary widely.

RECOMMENDATION: The MSG should increase state, local, and tribal contextual narrative content to provide citizens with the information most relevant to them and their local communities. In particular, the MSG should include information about legal and fiscal frameworks to portray different approaches to managing natural resources and extraction.

Recommendation 6:
Determine Steps to Increase Company Reporting

OBSERVATION: The levels of reporting were 31 out of 45 companies for DOI revenue and 12 out of a maximum of 41 applicable companies for corporate income taxes. The 2016 USEITI Report should seek to achieve meaningful progress for full reporting and reconciliation for in-scope companies and revenue streams.

RECOMMENDATION: The MSG, with support from the IA, should discuss, consider, decide, and act upon steps to increase participation by companies in the USEITI reporting and reconciliation process for DOI revenue and for corporate income taxes.

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